Appendix C.
Statistical Methodology

THE SCREENING PHASE AND THE MAIL LIST MODEL

The 1997 Census of Agriculture featured a pre-census screening phase that surveyed selected records, by mail or telephone, for presence or absence of agricultural activity. Records selected for screening had a low probability of qualifying as farms. All records responding to the screener and reporting no agricultural activity were removed from the census mail list. Eliminating nonfarm records from the mail list reduced respondent burden and data collection costs.

The screening phase included nearly 500,000 records. Records were selected for screening using one of the following criteria:

1) Records on selected agriculture specialty lists that had no other list source,
2) Records identified by a mail list model as having a low probability of being a farm.

A mail list model predicted the probability that an addressee on the 1997 preliminary census mail list operated a farm. The model defined groups based on combinations of characteristics such as source(s) of the mail list record, expected value of agricultural production, and geographic location. Farm proportions were estimated for these groups by calculating the proportion of 1992 census respondent records that were farms which exhibited the characteristics defined by the group. This proportion, also called the in-scope rate, provided an estimate of the probability that an addressee in the group operated a farm.

Each address record on the 1997 preliminary census mail list was assigned to a model group by matching record characteristics to model group characteristics. Records belonging to the groups with the highest farm probability were those more likely to be farms. Records with a farm probability of approximately 30 percent or less were selected for screening, along with records included on selected agriculture specialty lists as noted above.

Before screening, the preliminary census mail list consisted of 3,314,790 records. There were 478,298 records selected for screening. Of these, 125,570 records were determined to be nonfarms as a result of the screening phase and were removed. These records were removed from the final census mail list. The remaining 3,189,220 records received census report forms.

CENSUS SAMPLE DESIGN

All name and address records on the final census mail list were designated to receive a 1997 Census of Agriculture report form. Two different types of census report forms, sample and nonsample, were used to collect data. Sections 1 through 20 and 28 through 32 of the sample form were identical to sections on the nonsample census form. Sample form sections 21 through 27 contained additional questions on usage of fertilizers and chemicals, farm production expenditures, value of machinery and equipment, value of land and buildings, farm-related income, and hired workers. There were 11 regional versions of the nonsample form and 13 regional versions of the sample form with listings of crops varying by region. These different forms were used to reduce the response burden of the census, while providing reliable information on a large number of data items.

The sample form was mailed to all mail list records in Alaska, Hawaii, and Rhode Island and to a sample of records in other States selected from the final mail list. Mail list records were selected into the sample with certainty if they (1) were expected to have large total value of agricultural products sold or large acreage, (2) were multi-unit operations (i.e., separate farms producing under one company organization), (3) were in a county with less than 100 farms in 1992, or (4) had other special characteristics. Farms with special characteristics were abnormal farms, such as institutional farms, experimental and research farms, and Indian reservations. Mail list records in counties containing 100 to 199 farms in 1992 were systematically sampled at a rate of 1 in 2; records in counties containing 200 to 299 farms in 1992 were systematically sampled at a rate of 1 in 4; and records in counties containing 300 or more farms in 1992 were systematically sampled at a rate of 1 in 6. The remaining mail list records not chosen to receive the sample form received the nonsample census form. This differential sampling scheme was used to provide reliable data for the sample sections of the report form for all counties.

EDITING DATA AND IMPUTATION FOR ITEM NONRESPONSE

The census of agriculture complex edit and imputation system is an automated computerized system that performed the following functions:

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- Ensured reasonable relationships between/among data items, values for various sizes of farms, combinations of commodities, and economic interactions.
- Ensured necessary consistencies were present (there were more than 70 distinct consistency requirements).
- Ensured climatic, geographic, legal, and physical constraints were met.

The system performed these and similar functions for more than 900 data key codes for sample records and approximately 850 data key codes for nonsample records.

For the 1997 Census of Agriculture, as in previous censuses, all reported data were keyed and then edited by computer. The edits were used to determine whether the reports met the minimum criteria to be counted as farms in the census. The complex edit and imputation system provided the basis for deciding to accept, impute (supply), delete, or alter the reported value for each data record item.

Whenever possible, edit imputations, deletions, and changes were based on component or related data on the respondent's report form. For some items, such as operator characteristics, data for that record from the previous census were used when available. Values for other missing or unacceptable reported data items were calculated based on reported quantities and known fixed price parameters.

When these and similar methods were not available and values had to be supplied, the imputation process used information reported for another farm operation in a geographically adjacent area with characteristics similar to those of the farm operation with incomplete data. For example, a farm operation that reported acres of corn harvested, but did not report quantity of corn harvested, was assigned the same bushels of corn per acre harvested as that of the last nearby farm with similar characteristics that reported acceptable yields during that particular execution of the computer edit. The imputation for missing items in each section of the report form was conducted separately; thus, assigned values for one operation could come from more than one respondent.

Prior to the imputation operation, a set of default values and relationships was assigned to the possible imputation variables. The relationships and values varied depending on the item being imputed. For example, different default values were assigned for several Standard Industrial Classifications and total value of sales categories when imputing hired farm labor expenses. These values and item relationships for the possible imputation variables were stored in the computer in a series of matrices.

Each execution of the computer edit consisted of records from only one State sorted by reported State and county. For a given execution of the edit, the stored entries in the various matrices were retained in memory only until a succeeding record having acceptable characteristics for the same sections of the report form was processed by the computer. Then the acceptable responses of the succeeding operation replaced those previously stored. When a record processed through the edit had unreported or unacceptable data, the record was assigned the last acceptable ratio or response from an operation with a similar set of characteristics. Once each execution of the computer edit for a State was completed, the possible imputation variables were reset to the default values and relationships for subsequent executions. An edit run usually consisted of 10,000 or more records.

After the initial computer edit, all keyed reports not meeting the census farm definition were reviewed to ensure that the data had been keyed correctly. Edit referrals were generated for 17 percent of the reports included as farms; they were reviewed for keying accuracy and to ensure that the computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record re-edited.

CENSUS ESTIMATION

The 1997 Census of Agriculture used two types of statistical estimation procedures to account for whole farm nonresponse and sample data collection. The procedures were necessary because some farm operators did not respond to the census despite numerous attempts to contact them, and estimates for certain data items were based on a sample of farm operators rather than a full enumeration.

Whole Farm Nonresponse Estimation

Whole farm nonresponse to the census occurred when a response was never received for a record. If the record was a large farm, as defined by value of production or acreage, or a unique farm operation, intensive telephone or personal followup was conducted during census processing to obtain a response. If these attempts failed, either the NASS survey database, the census historic database, or other more current sources were used to impute data for the record.

During mail list development, the State Statistical Offices (SSOs), in an effort to reduce respondent burden, identified records that participated in multiple NASS surveys and/or situations where there were special reporting relationships between an enumerator and a respondent. These records were referred to as tagged records. The SSOs had full responsibility for the data collection for these records, including imputation of data for the record if a response was not obtainable.

Whole farm nonresponse that occurred within the remaining universe of records was accounted for by a statistical weighting procedure. The weights of the responding farms were adjusted to account for farms that did not respond. The information needed for this process was obtained from the 1997 Nonresponse Survey. The SSOs conducted the nonresponse survey using computer-assisted telephone interviewing (Blaise-CATI) or personal enumeration when telephone contact was not possible. Alaska and Rhode

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Island were not eligible for the survey because all nonrespondents were subject to extensive followup. In these cases, data were collected by telephone or other methods. The nonresponse survey collected information from a sample of census nonrespondents to determine farm status and estimate the proportion of farms in the nonresponse universe. The information was then used to estimate the number of nonresponding farm operations by State and county.

The 1997 Nonresponse Survey consisted of a stratified systematic sample of the nonresponse records within each State. The sample was selected near the end of the census follow-up operations. Five strata were defined to be homogeneous on probability of farm status and were based on screener status, total value produced, and list source(s) of the mail list record.

Based on survey results, estimates of the proportion of census nonrespondents operating farms were made for each stratum in the State. The estimates were applied to the total number of census nonrespondents in that stratum, providing a State estimate of the number of census nonrespondents that operated farms. The number of census nonrespondents that operated farms was then derived for each county by stratum. This estimation procedure assumed that the distribution of farms in a stratum by county was the same for census nonrespondents as for census respondents.

Within each stratum in a county, a noninteger nonresponse weight was calculated and assigned to each eligible respondent farm record. Census respondent farms that were designated as large farms or tagged records or as farms that exhibited ‘‘rare’’ commodities were ineligible to represent nonrespondent farms and were excluded from the nonresponse weighting procedure. These records were assigned nonresponse weights of 1.0.

The noninteger nonresponse weight is the ratio of the sum of the estimated number of nonrespondent farms from the nonresponse survey and the number of eligible census respondent farms, divided by the number of eligible census respondent farms. Stratum controls were established to ensure that this weight never exceeded 2.0. For the published tabulations of the complete count items, the noninteger nonresponse weight was randomly rounded to an integer weight of either 1 or 2 for each record. For the sample count items, the noninteger nonresponse weight was used in the calculation of the final sample weight.

Table A quantifies the effect of the nonresponse estimation procedure on selected census data items. The percentages in this table are percents of the census values contributed by nonresponse estimation. These indicate the potential for bias in published figures resulting from nonresponse to the census. The estimates provided in this table do not reflect the effect of item nonresponse to individual census data items. The effect of this item nonresponse is discussed in the ‘‘Census Nonsampling Error’’ section.

Sample Estimation

Sample data estimation determined the population totals that would have resulted from a complete census for the items in sections 21 through 27 of the sample form. The estimates were obtained from a weighting procedure that assigned a weight to each respondent record containing sample items. For any given county, a sample item total was estimated by multiplying the data items for each farm in the county by the corresponding sample weight and summing over all sample records.

Each respondent sample farm was assigned a sample weight for use in producing estimates for all sample items. For example, if the weight given to a sample farm had the value 6, all sample data items reported by that farm were multiplied by 6.

The noninteger sample weight is calculated for each respondent sample farm by multiplying the noninteger nonrespondent weight by the sampling factor. For published tabulations of the sample count items, the noninteger sample weight was randomly rounded to an integer weight for each record. For certainty farms, the sampling factor equals 1 so the sample weight is just equal to the nonresponse weight. Sampling factor calculation for non-certainty farms is described below.

Within a county, the weighting procedure for non-certainty farms was performed in three steps using three variables. The first variable contained eight 1997 total value of agricultural production (TVP) groups. The second and third variables, Standard Industrial Classification (SIC) code and farm acreage, contained two groups. The three sets of groups were:

TVP	SIC	Acres
$1 to $999	01, 08 All crops	1 to 69
$1,000 to $2,499	02 All livestock	70 or more
$2,500 to $4,999		
$5,000 to $9,999		
$10,000 to $24,999		
$25,000 to $49,999		
$50,000 to $99,999		
$100,000 or more		

The first step in the estimation procedure classified the sample records into 32 mutually exclusive initial strata formed by the three variable groups. The total and sample farm counts were expanded to account for nonresponse. Each cell containing sample farm records was assigned an initial sample factor equal to the ratio of the total farm count to the sample farm count. This factor was approximately equal to the inverse of the probability of selecting a farm for the census sample.

The second step in the estimation procedure combined, when necessary, the 32 initial strata to increase the reliability of the weighting procedure. Any stratum that contained less than 10 sample farms or had a factor greater than twice the mail sample rate was collapsed with another stratum. The mail sample rate was either 2, 4, or 6,

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depending on whether the county had a 1 in 2, 1 in 4, or 1 in 6 sample selection rate. The collapsing occurred within the 32 initial strata according to a specified collapsing pattern. After the collapsing process was completed, new total farm counts and sample farm counts were computed from each final strata and used to calculate final sample factors.

The final step calculated the noninteger sample weight as the product of the final sampling factor and the noninteger nonresponse weight. As described previously, the noninteger sample weight for each record is randomly rounded to an integer weight which is used in published tabulations. For example, if the final weight for a farm was 7.2, then the record would be rounded to either 7 or 8.

CENSUS SAMPLING ERROR

The sample for the 1997 Census of Agriculture was only one of a large number of possible samples of the same size that could have been selected using the same sample design. In this context, ‘‘sample’’ refers to the sample for both the nonresponse survey and the selection of farms to receive sample forms.

The standard error, or sampling error, of a survey estimate is a measure of the variation among the estimates from all possible samples. It is a measure of precision - that is, how well an estimate from a particular sample approximates the true population parameter. The percent relative standard error of an estimate is defined as the standard error of the estimate divided by the value of the estimate, then multiplied by 100. The true population parameter can be defined or conceptualized several different ways. One way is to think of the true population parameter as the average result of all possible samples (selected using a given sample design). A second way is to think of the true population parameter as the figure obtained from carrying out a complete enumeration of the population.

If all possible samples were selected, each of the samples surveyed under essentially the same conditions, and an estimate and its standard error calculated from each sample, then:

1. Approximately 90 percent of the intervals from 1.65 standard errors below the estimate to 1.65 standard errors above the estimate would include the true population parameter.

2. Approximately 95 percent of the intervals from 1.96 standard errors below the estimate to 1.96 standard errors above the estimate would include the true population parameter.

The following example illustrates the computations necessary to produce a confidence statement for an estimate. Assume that the estimate of number of farms for a State is 94,382 and the relative standard error of the estimate is 0.1 percent (0.001). Multiplying 94,382 by 0.001 yields 94, the standard error; therefore, a 90-percent confidence interval is 94,227 to 94,537 (i.e., 94,382 plus or minus 1.65 x 94). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 90 percent of these intervals would contain the true population parameter. Similarly, a 95-percent confidence interval is 94,198 to 94,566 (i.e., 94,382 plus or minus 1.96 x 94).

Census items were classified as either complete count or sample count items. All farm operators were asked the complete count items. Examples of complete count items were: land in farms, harvested cropland, livestock inventory and sales, crop acreage, quantities harvested and crop sales, land use, irrigation, government loans and payments, conservation acreage, type of organization, and operator characteristics.

Only a sample of farm operators were asked the sample count items. These items appeared only in sections 21 through 27 of the sample form. Sample count items were included under the following section headings: commercial fertilizers, chemicals, production expenses, farm machinery and equipment, value of land and buildings, farm-related income, and hired workers.

Variability in the estimates of complete count items was due only to the nonresponse survey estimation procedure. With regard to the estimates of sample count items, variability was due to both the nonresponse survey estimation procedure and the census sample selection and estimation procedure. Therefore, variability in the sample count item estimates tends to be larger than the variability in the complete count item estimates. Percent relative standard error is a common measure of variability.

Table B provides the generalized reliability estimates of the estimated number of farms in a county that reported complete count and sample count items. The top half of the table shows the percent relative standard errors for estimated number of farms in a county that reported a complete count item, and the bottom half relates to sample count items. These reliability estimates are derived from regression equations. Separate regression equations were used to produce each section of table B. Each regression equation was fit with the estimated number of farms in a county reporting an item as the independent variable and the relative variance of that estimate as the dependent variable for the appropriate counties in the State. To illustrate the use of this table, assume that the estimate of the number of farms reporting hogs and pigs for a particular county, as given in county table 15, is 89. Since hogs and pigs is a complete count data item, refer to the first part of table B and use the estimated percent relative standard error of the estimate from the row with farm count equal to or just less than the estimated number of farms, 89. For this example, the percent relative standard error of the estimate comes from the row for 75 farms reporting. For sample count items, follow the same procedure using the second part of table B. For counties with fewer than 100 farms in the 1992 Census of Agriculture, variability in sample count

item estimates came only from nonresponse survey estimation procedures. The estimated relative standard error for a sample count item in these counties may be obtained using the first part of table B.

Use caution when referring to the ‘‘Sample Count Item’’ section of table B to make inferences on counties. Some counties may have been sampled at the rate of 1 in 2 or 1 in 4, but the reliability estimates shown were computed using only data from counties sampled at the rate of 1 in 6. Therefore, the reliability estimates shown would likely be overstated (or conservative) if the county was actually sampled at a higher rate.

Table C presents the percent relative standard error of selected State data items for all farms, and table D presents the percent relative standard error of selected State data items for all farms with sales of $10,000 or more.

Table E presents the standard error for percent change in State totals from 1992 to 1997. The general purpose of the percent change estimate is to provide a relative measure of the difference in a characteristic between censuses. The relative change for a given characteristic is defined as the ratio of the difference of the 1997 and the 1992 estimate for that characteristic to the 1992 estimate. This ratio is multiplied by 100 to obtain the percent change. The standard error of a percent change estimate is the standard error of the ratio multiplied by 100.

Table F presents the percent relative standard error for State and county totals for selected data items. The percent relative standard error of the estimate for the same item differs among counties in the State. Reasons for this are differences among counties in the (1) total number of farms, (2) number of large farms included with certainty, (3) size classifications of the farms sampled, (4) amount of nonresponse, (5) general agricultural characteristics, and (6) specific characteristic being measured.

The farm counts and related estimates displayed in tables A through F relate to unadjusted census totals. These totals are the same as the ‘‘Census total’’ displayed in the first column of table G (which will be discussed later in this appendix).

For most of the tables in this appendix, and also many of the tables throughout the publication, there is a footnote that reads ‘‘Data are based on a sample of farms.’’ The table entries that this footnote relate to are estimates of totals. To illustrate, suppose that the entry ‘‘other farm-related income’’ is shown with this footnote and has some number of farms given. This number given would represent an estimated total number of farms with ‘‘other farm-related income,’’ based on the farms that were in the sample. This number should not be interpreted as the number of farms in the sample that have ‘‘other farm-related income.’’

CENSUS NONSAMPLING ERROR

The accuracy of the census counts is affected jointly by sampling errors (described in the previous section) and nonsampling errors. Extensive efforts were made to compile a complete and accurate mail list for the census, to design an understandable report form with instructions, and to minimize processing errors through the use of quality control measures. Nonsampling errors arise from many sources, including respondent or enumerator error or incorrect data keying, editing, or imputing for missing data. These nonsampling errors are further discussed in this section. Nonsampling error due to mail list incompleteness and duplication as well as misclassification of records on the mail list is called coverage error. The section titled ‘‘Coverage Evaluation’’ discusses the evaluation studies conducted to measure the extent of this error in the census.

Respondent and Enumerator Error

Incorrect or incomplete responses to the census report form or to the questions posed by an enumerator can introduce error into the census data. To reduce reporting error, detailed instructions for completing the report form were provided to each respondent. Questions were phrased as clearly as possible based on previous tests of the report form. In addition, each respondent’s answers were checked for completeness and consistency by the complex edit and imputation system.

Item Nonresponse

As information flowed from data collection to tabulation, various types of item nonresponses were identified on the census report forms. Nonresponse to particular questions on the census report form that logically should have been present created a type of nonsampling error in both complete count and sample count data. In this case, information from a similar farm was used to impute for these missing data items. The resulting data may have been biased if the characteristics of the nonreporting respondents were different from those of reporting respondents for those items.

Processing Error

All phases of processing for each census report form were potential sources for the introduction of nonsampling error. An automated check-in recorded that the report had been returned and excluded from further followup mailings. Approximately one-third of the mail returns were reviewed to resolve questions dealing with multiple reports, respondent remarks, or no reported data. The remaining mail returns (about two-thirds) were batched and sent directly to data keying, along with some of the reviewed cases containing farm data. Keyed records were transmitted, formatted, and run through the complex edit and imputation system. About one-fifth of all forms edited were clerically reviewed for inconsistencies, omissions, or questionable values. While reviewing these forms, the edit review staff determined if the action taken by the computer edit and imputation system was correct. Edited records were tabulated to the county level. Each county was reviewed and, when necessary, individual records were corrected prior to publication.

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Developing accurate processing methods is complicated by the complex structure of agriculture. Among the complexities are the many places to be included, the variety of arrangements under which farms are operated, the continuing changes in the relationship of operators to the farm operated, the expiration of leases and the initiation or renewal of leases, the problem of obtaining a complete list of agriculture operations, the difficulty of contacting and identifying some types of contractor/contractee relationships, the operator's absence from the farm during the data collection period, and the operator's opinion that part or all of the operation does not qualify and should not be included in the census. During data collection and processing of the census, all operations underwent a number of quality control checks to ensure as accurate an application as possible.

COVERAGE EVALUATION

Coverage Overview

The primary objectives of the census of agriculture are to accurately count U.S. farms, measure commodity production and sales, and measure demographic characteristics of farm operators. Since 1945, an evaluation of census coverage has been conducted for each census of agriculture to provide estimates of the completeness of census farm counts. These results help to identify problems and focus improvements for future censuses.

According to coverage evaluation results, the past five censuses of agriculture included an average of 92 percent of U.S. farms and 98 percent of agriculture production. Complete enumeration of agricultural operations satisfying the farm definition of $1,000 or more in agricultural sales is complicated by the variety of arrangements under which farms are operated, the multiplicity of names used for an operation, the number of operations in which an operator participates, and the difficulty in classifying those operations just around the $1,000 sales range. In 1997, extensive efforts were made to compile as complete and accurate a mail list as possible, while reducing the duplication and number of nonfarm operations on the list.

The 1997 coverage evaluation program was designed to measure four components of error in the census farm counts. These components include:

1. Undercount due to farms Not on the Mail List (NML)
2. Overcount due to farms Duplicated or enumerated more than once (DUP)
3. Undercount due to farms Incorrectly Classified as nonfarms (ICU)
4. Overcount due to nonfarms Incorrectly Classified as farms (ICO).

The first component, mail list undercount, is by far the largest component of coverage error. Duplication, though occurring far less frequently, can involve larger farms and have a larger impact on acreage and sales estimates. The last two components involve the misclassification of either farms or nonfarms. Misclassification can arise from errors in either reporting or processing the data.

Table G - Coverage Estimates - illustrates the effect of coverage adjustments on census farm counts by demographic characteristics, land in farms, and total value of sales. The coverage total is defined as the net difference between undercounted and overcounted farms. The adjusted census total is the sum of the census total and the net coverage total. The relative standard error is shown for the final census coverage adjusted number. This number will be similar to the relative standard error for the census number, except when the coverage total is negative or close to zero. The coverage adjustment percentage shows the coverage total as a percentage of total census adjusted farms for that characteristic.

The 1997 Census of Agriculture is the first census to include all four components of coverage error in table G. Previous publications only included the coverage error component due to farms not on the mail list (NML). Because of this, caution should be taken when comparing coverage estimates from table G with previous years. In addition, the coverage total is a negative number for some characteristics. This means that the number of farms overcounted for this characteristic was greater than the number of farms undercounted.

Area Frame Surveys to Measure Mail List Undercoverage

Names and addresses collected in the 1997 June Agricultural Survey and 1997 Fall Area Survey were used to estimate the undercount due to farms not on the census mail list (NML). These names were matched to the census mail list, and those that did not match were contacted by telephone or person. The enumerator verified whether the operation had reported in the census, and if not, a census of agriculture report form was completed.

The percentage of farms missed in the census varies considerably by State. In general, farms not on the mail list tended to be small in acreage, production, and sales of agricultural products. Farm operations could be missed for various reasons, including the possibility that the operation started after the mail list was developed, the operation may be so small as not to appear in any agriculture-related source lists, or the operation may have been falsely classified as a nonfarm prior to mailout.

Classification Error Survey to Measure Three Types of Coverage Error

The remaining three types of coverage error were measured by the Classification Error Survey. This survey was used to estimate the number of farms counted more than once (DUP), the number of farms misclassified as nonfarms (ICU), and the number of nonfarms misclassified as farms (ICO). A sample of census of agriculture respondents was selected for reinterview to determine their farm/nonfarm status and collect information to identify

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potential duplication. The farm classification from this interview was compared with the classification on the census of agriculture report form. Any differences between these two classifications were reconciled to determine the true farm status. Each operation was reviewed for duplication by matching the additional information received from the reinterview (landlords, tenants, other names, etc.) to the list of census respondents. Potential duplication was reviewed and discrepancies reconciled.

In general, the classification error rate is higher for small farms close to the $1,000 agricultural sales requirement. This rate is also higher for farms with small acreage (less than 49 acres), higher for tenant farms than for full- or part-owner farms, and higher for farms where farming is not the operator's principal occupation.

Coverage Estimation

The adjusted census total, T, is estimated as the census farm count, C, plus undercount and minus overcount adjustments. Undercount includes 1) farms not on the mail list (NML) and 2) farms incorrectly classified as nonfarms (ICU). Overcount includes 3) nonfarms incorrectly classified as farms (ICO) and 4) farms duplicated in the census (DUP). Altogether, the adjusted census total is:

$$T = C + (NML + ICU) - (ICO + DUP).$$

In some States, estimates of misclassification of farms owned by operators having rare demographic characteristics were based on particularly small sample sizes. Where such small sample sizes occurred, a form of small area estimation was used in which data from similar States contributed to that State's estimates. In these cases, the coverage totals are weighted totals of the direct State estimate and the direct estimate from the region. Direct estimates were used to the largest extent possible, based on the amount of survey cases available for the particular item being estimated.

Table A. **Percent of State Totals Contributed by Whole Farm Nonresponse Estimation: 1997**

Item		Percent of total	Item		Percent of total
Farms	number	10.4	Corn for grain or seed	acres	5.2
Land in farms	acres	2.9	Wheat for grain	acres	3.8
Estimated market value of land and buildings[1]	$1,000	5.8	Livestock and poultry inventory:		
Market value of agricultural products sold	$1,000	2.8	Cattle and calves	number	5.7
Harvested cropland	acres	6.1	Hogs and pigs	number	.5
			Layers 20 weeks old and older	number	.1

[1]Data are based on a sample of farms.

Table B. **Reliability Estimates for Number of Farms in a County Reporting a Complete Count Item or Sample Count Item: 1997**

Farms	Relative standard error of estimate (percent)	Farms	Relative standard error of estimate (percent)
COMPLETE COUNT ITEM		SAMPLE COUNT ITEM	
Number of farms reporting:		Number of farms reporting:	
25	5.4	25	41.1
50	3.5	50	28.5
75	2.5	75	22.9
100	1.8	100	19.4
150	.4	150	15.2
200	.3	200	12.6
300	.3	300	9.3
500	.2	500	5.3
750	.2	750	4.3
1,000	.1	1,000	3.7
1,500	.1	1,500	3.0
2,000	.1	2,000	2.6

Table C. **Reliability Estimates of State Totals for All Farms: 1997**

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS			
Farms	number	14 181	.5
Land in farms	acres	12 024 661	.2
Average size of farm	acres	848	.5
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD			
Total sales (see text)	farms	14 181	.5
	$1,000	877 295	.2
Average per farm	dollars	61 864	.5
Farms by value of sales:			
Less than $1,000 (see text)	farms	2 261	.8
	$1,000	468	1.2
$1,000 to $2,499	farms	1 965	.8
	$1,000	3 209	.8
$2,500 to $4,999	farms	1 867	.8
	$1,000	6 634	.8
$5,000 to $9,999	farms	1 904	.8
	$1,000	13 497	.8
$10,000 to $19,999	farms	1 761	.9
	$1,000	24 754	1.0
$20,000 to $24,999	farms	509	1.5
	$1,000	11 253	1.5
$25,000 to $39,999	farms	946	1.3
	$1,000	29 918	1.3
$40,000 to $49,999	farms	382	1.8
	$1,000	16 890	1.8
$50,000 to $99,999	farms	949	1.2
	$1,000	66 740	1.2
$100,000 to $249,999	farms	923	.6
	$1,000	145 953	.5
$250,000 to $499,999	farms	394	–
	$1,000	136 645	–
$500,000 or more	farms	320	–
	$1,000	421 336	–
Sales by commodity or commodity group:			
Crops, including nursery and greenhouse crops	farms	6 492	.5
	$1,000	247 443	.3
Grains	farms	2 337	.7
	$1,000	45 649	.5
Corn for grain	farms	272	1.6
	$1,000	6 150	1.0
Wheat	farms	1 129	.8
	$1,000	25 932	.6
Soybeans	farms	1	–
	$1,000	(D)	(D)
Sorghum for grain	farms	7	9.3
	$1,000	(D)	(D)
Barley	farms	1 321	.9
	$1,000	10 542	.9
Oats	farms	208	2.0
	$1,000	656	3.3
Other grains	farms	112	2.0
	$1,000	2 201	1.5
Cotton and cottonseed	farms	–	–
	$1,000	–	–
Tobacco	farms	–	–
	$1,000	–	–
Hay, silage, and field seeds	farms	4 836	.6
	$1,000	103 420	.5
Vegetables, sweet corn, and melons	farms	294	1.6
	$1,000	12 068	1.0
Fruits, nuts, and berries	farms	407	1.5
	$1,000	10 859	1.2
Nursery and greenhouse crops	farms	324	1.6
	$1,000	70 160	.3
Other crops	farms	116	2.4
	$1,000	5 286	.6
Livestock, poultry, and their products	farms	9 531	.5
	$1,000	629 852	.2
Poultry and poultry products	farms	326	1.6
	$1,000	68 093	.2
Dairy products	farms	679	.7
	$1,000	195 545	.1
Cattle and calves	farms	7 598	.5
	$1,000	259 998	.3
Hogs and pigs	farms	379	1.5
	$1,000	40 496	.2
Sheep, lambs, and wool	farms	1 380	.8
	$1,000	30 144	.4
Other livestock and livestock products (see text)	farms	1 895	.8
	$1,000	35 577	.7
Value of agricultural products sold directly to individuals for human consumption (see text)	farms	1 036	1.0
	$1,000	6 269	1.1

Item		Total	Relative standard error of estimate (percent)
FARM PRODUCTION EXPENSES[1]			
Total farm production expenses	farms	14 177	.5
	$1,000	699 532	.5
Average per farm	dollars	49 343	.7
Livestock and poultry purchased	farms	5 266	2.4
	$1,000	82 463	1.7
Feed for livestock and poultry	farms	7 655	1.6
	$1,000	198 854	.6
Commercially mixed formula feeds	farms	3 635	3.0
	$1,000	81 738	1.1
Seeds, bulbs, plants, and trees	farms	5 288	2.2
	$1,000	17 281	2.2
Commercial fertilizer	farms	7 097	1.8
	$1,000	22 174	2.9
Agricultural chemicals	farms	5 883	2.0
	$1,000	9 374	3.3
Petroleum products	farms	13 082	.7
	$1,000	37 590	1.2
Electricity	farms	7 182	1.7
	$1,000	16 687	1.8
Hired farm labor	farms	6 059	2.0
	$1,000	79 611	1.0
Contract labor	farms	1 698	4.5
	$1,000	7 900	3.3
Repair and maintenance	farms	11 109	1.1
	$1,000	45 915	1.4
Customwork, machine hire, and rental of machinery and equipment	farms	4 592	2.5
	$1,000	11 281	3.0
Interest	farms	5 163	2.2
	$1,000	50 664	1.8
Secured by real estate	farms	3 887	2.7
	$1,000	36 127	2.1
Not secured by real estate	farms	2 551	3.5
	$1,000	14 537	2.4
Cash rent	farms	3 565	2.9
	$1,000	19 126	3.3
Property taxes	farms	13 527	.6
	$1,000	16 505	1.5
All other farm production expenses	farms	12 863	.8
	$1,000	84 106	1.1
NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]			
All farms	number	14 178	.5
	$1,000	160 519	2.0
Average per farm	dollars	11 322	2.0
Farms with net gains[2]	number	6 803	1.7
	$1,000	236 067	1.0
Average net gain	dollars	34 700	2.0
Farms with net losses	number	7 375	1.6
	$1,000	75 548	2.0
Average net loss	dollars	10 244	2.6
GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME			
Government payments	farms	2 284	.7
	$1,000	15 205	1.1
Other farm-related income[1]	farms	2 887	3.4
	$1,000	12 979	4.5
Customwork and other agricultural services	farms	1 023	6.3
	$1,000	6 515	7.7
Gross cash rent or share payments	farms	1 105	6.3
	$1,000	3 814	6.8
Forest products, excluding Christmas trees and maple products	farms	72	27.9
	$1,000	339	13.0
Other farm-related income sources	farms	1 225	5.3
	$1,000	2 311	5.0
COMMODITY CREDIT CORPORATION LOANS			
Total	farms	153	1.8
	$1,000	2 938	1.5

See footnotes at end of table.

Table C. **Reliability Estimates of State Totals for All Farms: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			
Total cropland	farms	12 227	.5
	acres	2 069 751	.5
Harvested cropland	farms	10 393	.5
	acres	1 107 928	.4
Farms by acres harvested:			
1 to 9 acres	farms	2 255	.7
	acres	10 618	.8
10 to 19 acres	farms	1 525	.8
	acres	20 282	.9
20 to 29 acres	farms	1 025	1.0
	acres	23 453	1.0
30 to 49 acres	farms	1 322	1.0
	acres	48 849	1.0
50 to 99 acres	farms	1 594	1.0
	acres	110 403	1.0
100 to 199 acres	farms	1 277	1.0
	acres	174 772	1.0
200 to 499 acres	farms	965	.9
	acres	285 575	.9
500 to 999 acres	farms	302	.9
	acres	200 722	.8
1,000 acres or more	farms	128	–
	acres	233 254	–
Cropland:			
Pasture or grazing only	farms	6 257	.6
	acres	558 120	.8
Other cropland	farms	2 431	.7
	acres	403 703	1.0
Total woodland	farms	629	1.1
	acres	357 546	.8
Pastureland and rangeland other than cropland and woodland pastured	farms	4 619	.6
	acres	9 247 212	.2
Land in house lots, ponds, roads, wasteland, etc.	farms	6 800	.5
	acres	350 152	.7
Irrigated land	farms	11 291	.5
	acres	1 212 201	.5
Acres irrigated:			
1 to 9 acres	farms	2 544	.7
	acres	12 188	.8
10 to 49 acres	farms	4 058	.6
	acres	97 929	.7
50 to 99 acres	farms	1 684	.9
	acres	116 862	.9
100 to 199 acres	farms	1 427	1.0
	acres	196 629	1.0
200 to 499 acres	farms	1 140	.9
	acres	343 457	.9
500 to 999 acres	farms	312	1.0
	acres	206 534	1.0
1,000 acres or more	farms	126	.7
	acres	238 602	.6
Harvested cropland irrigated	farms	9 599	.5
	acres	872 322	.5
Pasture and other land irrigated	farms	5 352	.6
	acres	339 879	.8
Land under Conservation Reserve or Wetlands Reserve Programs	farms	845	1.1
	acres	228 701	1.5
VALUE OF LAND AND BUILDINGS[1]			
Estimated market value of land and buildings	farms	14 178	.5
	$1,000	6 893 843	1.3
Average per farm	dollars	486 235	1.4
Average per acre	dollars	575	1.6
VALUE OF MACHINERY AND EQUIPMENT[1]			
Estimated market value of all machinery and equipment	farms	14 178	.5
	$1,000	725 177	1.6
Average per farm	dollars	51 148	1.7
AGRICULTURAL CHEMICALS[1]			
Commercial fertilizer	farms	7 033	1.8
	acres on which used	687 970	3.1

Item		Total	Relative standard error of estimate (percent)
TENURE OF OPERATOR			
All operators	farms	14 181	.5
	acres	12 024 661	.2
Full owners	farms	8 924	.5
	acres	7 343 578	.2
Part owners	farms	4 282	.6
	acres	4 335 491	.4
Tenants	farms	975	1.0
	acres	345 592	1.3
OWNED AND RENTED LAND			
Land owned	farms	13 230	.5
	acres	10 170 410	.2
Owned land in farms	farms	13 206	.5
	acres	9 787 611	.2
Land rented or leased from others	farms	5 303	.6
	acres	2 279 603	.5
	landlords	11 124	.6
Rented or leased land in farms	farms	5 257	.6
	acres	2 237 050	.5
Land rented or leased to others	farms	1 330	.9
	acres	425 352	1.8
OPERATOR CHARACTERISTICS			
Operators by place of residence:			
On farm operated		9 194	.5
Not on farm operated		4 206	.6
Not reported		781	1.0
Operators by principal occupation:			
Farming		5 987	.5
Other		8 194	.5
Operators by days worked off farm:			
Any		8 726	.5
200 days or more		6 066	.6
Operators by sex:			
Male	farms	13 449	.5
	acres	11 786 273	.2
Female	farms	732	1.2
	acres	238 388	1.8
Average age of operator	years	55.4	.7
FARMS BY TYPE OF ORGANIZATION			
Individual or family (sole proprietorship)	farms	11 503	.5
	acres	3 988 575	.5
Partnership	farms	1 545	.9
	acres	1 611 571	.6
Corporation:			
Family held	farms	729	1.0
	acres	1 736 729	.3
More than 10 stockholders	farms	41	3.4
10 or less stockholders	farms	688	1.1
Other than family held	farms	99	2.7
	acres	124 076	1.3
More than 10 stockholders	farms	17	6.5
10 or less stockholders	farms	82	2.9
Other—cooperative, estate or trust, institutional, etc.	farms	305	1.6
	acres	4 563 710	.1
HIRED FARM LABOR[1]			
Hired workers by days worked:			
150 days or more	farms	2 161	3.3
	workers	6 131	1.8
Less than 150 days	farms	5 503	2.2
	workers	19 218	2.3
INJURIES AND DEATHS			
Farm-related injuries:			
Operator and family members	farms	188	2.0
	number	211	2.1
Hired workers	farms	105	1.3
	number	136	1.1
Farm-related deaths:			
Operator and family members	farms	7	–
	number	7	–
Hired workers	farms	2	–
	number	(D)	(D)

See footnotes at end of table.

Table C. **Reliability Estimates of State Totals for All Farms: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
FARMS BY SIZE			
1 to 9 acres	farms	2 590	.7
	acres	11 123	.8
10 to 49 acres	farms	3 978	.6
	acres	96 490	.6
50 to 69 acres	farms	823	1.1
	acres	47 704	1.1
70 to 99 acres	farms	902	1.1
	acres	74 106	1.1
100 to 139 acres	farms	871	1.1
	acres	100 942	1.1
140 to 179 acres	farms	649	1.3
	acres	102 169	1.3
180 to 219 acres	farms	465	1.5
	acres	92 033	1.5
220 to 259 acres	farms	383	1.6
	acres	91 101	1.6
260 to 499 acres	farms	1 194	1.0
	acres	424 749	1.0
500 to 999 acres	farms	945	1.1
	acres	656 348	1.1
1,000 to 1,999 acres	farms	646	1.2
	acres	877 470	1.2
2,000 acres or more	farms	735	.7
	acres	9 450 426	.2
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			
Oilseed and grain farming (1111)	farms	1 064	1.0
	acres	635 290	.9
Vegetable and melon farming (1112)	farms	169	2.1
	acres	27 379	4.3
Fruit and tree nut farming (1113)	farms	391	1.5
	acres	20 492	2.4
Greenhouse, nursery, and floriculture production (1114)	farms	274	1.7
	acres	16 731	3.8
Other crop farming (1119)	farms	3 097	.7
	acres	907 757	.8
Beef cattle ranching and farming (112111)	farms	5 309	.6
	acres	8 677 855	.2
Cattle feedlots (112112)	farms	433	1.5
	acres	159 980	1.8
Dairy cattle and milk production (11212)	farms	614	.7
	acres	270 893	.6
Hog and pig farming (1122)	farms	114	2.7
	acres	25 249	6.8
Poultry and egg production (1123)	farms	171	1.9
	acres	39 854	3.3
Sheep and goat farming (1124)	farms	667	1.1
	acres	1 120 333	.3
Animal aquaculture and other animal production (1125, 1129)	farms	1 878	.8
	acres	122 848	2.0

Item		Total	Relative standard error of estimate (percent)
LIVESTOCK			
Cattle and calves inventory	farms	7 986	.5
	number	916 090	.4
Beef cows	farms	5 749	.6
	number	383 790	.6
Milk cows	farms	891	.7
	number	92 953	.2
Cattle and calves sold	farms	7 598	.5
	number	524 128	.4
	$1,000	259 998	.3
Hogs and pigs inventory	farms	511	1.3
	number	292 472	.2
Hogs and pigs sold	farms	379	1.5
	number	330 515	.3
	$1,000	40 496	.2
Sheep and lambs of all ages inventory	farms	1 438	.8
	number	438 678	.4
Sheep and lambs sold	farms	1 318	.9
	number	315 450	.4
Horses and ponies inventory	farms	7 031	.5
	number	49 087	.7
Horses and ponies sold	farms	1 479	.9
	number	7 464	.9
POULTRY			
Layers and pullets 13 weeks old and older inventory (see text)	farms	535	1.3
	number	1 921 163	(L)
Layers 20 weeks old and older	farms	527	1.4
	number	1 729 365	(L)
Broilers and other meat-type chickens sold	farms	19	6.9
	number	(D)	(D)
SELECTED CROPS HARVESTED			
Corn for grain or seed	farms	377	1.3
	acres	17 200	.9
	bushels	2 533 052	.9
Corn for silage or green chop	farms	855	.9
	acres	38 495	.6
	tons, green	840 576	.5
Wheat for grain	farms	1 148	.8
	acres	182 372	.6
	bushels	7 832 313	.6
Barley for grain	farms	1 929	.7
	acres	94 072	.6
	bushels	7 422 580	.6
Oats for grain	farms	481	1.3
	acres	9 208	1.7
	bushels	643 121	2.0
Potatoes, excluding sweetpotatoes	farms	98	2.9
	acres	3 247	.9
	cwt	932 938	1.2
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms	9 033	.5
	acres	740 740	.5
	tons, dry	2 533 360	.5
Alfalfa hay	farms	7 966	.5
	acres	541 939	.5
	tons, dry	2 097 541	.5
Vegetables harvested for sale (see text)	farms	294	1.6
	acres	6 695	1.3
Land in orchards	farms	631	1.2
	acres	10 162	1.5

[1]Data are based on a sample of farms.
[2]Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table D. Reliability Estimates of State Totals for Farms With Sales of $10,000 or More: 1997

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS			
Farms	number	6 184	.6
Land in farms	acres	10 979 933	.2
Average size of farm	acres	1 776	.6
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD			
Total sales (see text)	farms	6 184	.6
	$1,000	853 487	.2
Average per farm	dollars	138 015	.6
Farms by value of sales:			
$10,000 to $19,999	farms	1 761	.8
	$1,000	24 754	.9
$20,000 to $24,999	farms	509	1.5
	$1,000	11 253	1.5
$25,000 to $39,999	farms	946	1.2
	$1,000	29 918	1.2
$40,000 to $49,999	farms	382	1.8
	$1,000	16 890	1.8
$50,000 to $99,999	farms	949	1.2
	$1,000	66 740	1.2
$100,000 to $249,999	farms	923	.6
	$1,000	145 953	.5
$250,000 to $499,999	farms	394	–
	$1,000	136 645	–
$500,000 or more	farms	320	–
	$1,000	421 336	–
Sales by commodity or commodity group:			
Crops, including nursery and greenhouse crops	farms	3 416	.7
	$1,000	238 795	.3
Grains	farms	1 678	.7
	$1,000	44 067	.5
Corn for grain	farms	243	1.6
	$1,000	6 070	1.0
Wheat	farms	888	.8
	$1,000	25 250	.6
Soybeans	farms	1	–
	$1,000	(D)	(D)
Sorghum for grain	farms	6	9.5
	$1,000	(D)	(D)
Barley	farms	951	1.0
	$1,000	9 829	.9
Oats	farms	134	2.3
	$1,000	556	4.1
Other grains	farms	108	1.9
	$1,000	2 195	1.4
Cotton and cottonseed	farms	–	–
	$1,000	–	–
Tobacco	farms	–	–
	$1,000	–	–
Hay, silage, and field seeds	farms	2 482	.7
	$1,000	97 435	.5
Vegetables, sweet corn, and melons	farms	198	1.8
	$1,000	11 836	1.0
Fruits, nuts, and berries	farms	142	2.3
	$1,000	10 361	1.2
Nursery and greenhouse crops	farms	212	1.6
	$1,000	69 855	.3
Other crops	farms	81	2.6
	$1,000	5 241	.7
Livestock, poultry, and their products	farms	4 948	.6
	$1,000	614 692	.2
Poultry and poultry products	farms	144	1.8
	$1,000	67 940	.2
Dairy products	farms	654	.7
	$1,000	195 497	.1
Cattle and calves	farms	4 371	.6
	$1,000	248 958	.3
Hogs and pigs	farms	193	1.9
	$1,000	40 234	.2
Sheep, lambs, and wool	farms	624	1.1
	$1,000	28 940	.4
Other livestock and livestock products (see text)	farms	774	1.0
	$1,000	33 123	.7
Value of agricultural products sold directly to individuals for human consumption (see text)	farms	383	1.4
	$1,000	5 309	1.2
FARM PRODUCTION EXPENSES[1]			
Total farm production expenses	farms	6 197	.6
	$1,000	657 125	.6
Average per farm	dollars	106 039	.8
Livestock and poultry purchased	farms	2 908	2.8
	$1,000	77 622	1.7
Feed for livestock and poultry	farms	3 896	2.0
	$1,000	193 798	.6
Commercially mixed formula feeds	farms	2 032	3.4
	$1,000	80 756	1.1
Seeds, bulbs, plants, and trees	farms	3 495	2.2
	$1,000	16 657	2.2
Commercial fertilizer	farms	3 959	2.0
	$1,000	20 710	3.1
Agricultural chemicals	farms	3 394	2.2
	$1,000	8 621	3.5
Petroleum products	farms	6 097	.7
	$1,000	33 032	1.3
Electricity	farms	4 329	1.8
	$1,000	15 862	1.8
Hired farm labor	farms	3 865	2.1
	$1,000	77 428	.9
Contract labor	farms	1 175	4.8
	$1,000	7 429	3.5
Repair and maintenance	farms	5 638	1.1
	$1,000	40 171	1.4
Customwork, machine hire, and rental of machinery and equipment	farms	2 625	2.9
	$1,000	9 953	3.2
Interest	farms	3 667	2.2
	$1,000	47 113	1.8
Secured by real estate	farms	2 765	2.9
	$1,000	33 142	2.2
Not secured by real estate	farms	2 016	3.6
	$1,000	13 972	2.4
Cash rent	farms	2 352	3.2
	$1,000	18 038	3.5
Property taxes	farms	5 944	.8
	$1,000	11 483	1.6
All other farm production expenses	farms	6 196	.6
	$1,000	79 209	1.1
NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]			
All farms	number	6 198	.6
	$1,000	179 333	1.7
Average per farm	dollars	28 934	1.8
Farms with net gains[2]	number	4 414	1.8
	$1,000	231 686	1.0
Average net gain	dollars	52 489	2.0
Farms with net losses	number	1 784	4.2
	$1,000	52 352	2.3
Average net loss	dollars	29 346	4.8
GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME			
Government payments	farms	1 599	.8
	$1,000	10 747	1.0
Other farm-related income[1]	farms	1 767	4.1
	$1,000	10 797	5.1
Customwork and other agricultural services	farms	680	7.3
	$1,000	5 804	8.5
Gross cash rent or share payments	farms	498	9.1
	$1,000	2 572	8.0
Forest products, excluding Christmas trees and maple products	farms	19	46.4
	$1,000	267	7.3
Other farm-related income sources	farms	968	5.6
	$1,000	2 153	5.0
COMMODITY CREDIT CORPORATION LOANS			
Total	farms	147	1.8
	$1,000	2 924	1.5

See footnotes at end of table.

Table D. **Reliability Estimates of State Totals for Farms With Sales of $10,000 or More: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			
Total cropland	farms	5 626	.6
	acres	1 707 640	.5
Harvested cropland	farms	5 248	.6
	acres	1 001 476	.4
Cropland:			
Pasture or grazing only	farms	2 790	.7
	acres	405 333	.9
Total woodland	farms	314	1.4
	acres	316 245	.8
Pastureland and rangeland other than cropland and woodland pastured	farms	2 527	.7
	acres	8 671 487	.2
Land in house lots, ponds, roads, wasteland, etc.	farms	3 058	.6
	acres	284 561	.6
Irrigated land	farms	5 319	.6
	acres	1 056 782	.5
Harvested cropland irrigated	farms	4 951	.6
	acres	785 676	.5
Pasture and other land irrigated	farms	2 351	.8
	acres	271 106	.8
Land under Conservation Reserve or Wetlands Reserve Programs	farms	428	1.3
	acres	136 959	1.4
VALUE OF LAND AND BUILDINGS[1]			
Estimated market value of land and buildings	farms	6 198	.6
	$1,000	5 232 283	1.4
Average per farm	dollars	844 189	1.6
Average per acre	dollars	478	1.7
VALUE OF MACHINERY AND EQUIPMENT[1]			
Estimated market value of all machinery and equipment	farms	6 198	.6
	$1,000	526 163	1.8
Average per farm	dollars	84 892	1.9
AGRICULTURAL CHEMICALS[1]			
Commercial fertilizer	farms	3 929	2.0
	acres on which used	632 142	3.3
TENURE OF OPERATOR			
All operators	farms	6 184	.6
	acres	10 979 933	.2
Full owners	farms	3 083	.7
	acres	6 693 943	.2
Part owners	farms	2 650	.7
	acres	3 997 518	.3
Tenants	farms	451	1.4
	acres	288 472	1.1
OWNED AND RENTED LAND			
Land owned	farms	5 742	.6
	acres	9 222 387	.2
Owned land in farms	farms	5 733	.6
	acres	8 974 688	.2
Land rented or leased from others	farms	3 125	.6
	acres	2 038 306	.4
	landlords	7 708	.7
Rented or leased land in farms	farms	3 101	.6
	acres	2 005 245	.4
Land rented or leased to others	farms	522	1.4
	acres	280 760	2.1
OPERATOR CHARACTERISTICS			
Operators by place of residence:			
On farm operated		4 007	.6
Not on farm operated		1 816	.8
Not reported		361	1.3
Operators by principal occupation:			
Farming		3 948	.6
Other		2 236	.8
Operators by days worked off farm:			
Any		3 055	.7
200 days or more		1 847	.9
Operators by sex:			
Male		5 978	.6
Female		206	2.0
Average age of operator	years	55.3	.8

See footnotes at end of table.

Item		Total	Relative standard error of estimate (percent)
FARMS BY TYPE OF ORGANIZATION			
Individual or family (sole proprietorship)	farms	4 454	.6
	acres	3 269 616	.5
Partnership	farms	934	1.0
	acres	1 482 199	.5
Corporation:			
Family held	farms	592	1.0
	acres	1 679 324	.3
More than 10 stockholders	farms	31	2.8
10 or less stockholders	farms	561	1.0
Other than family held	farms	57	2.6
	acres	94 939	.7
More than 10 stockholders	farms	12	7.0
10 or less stockholders	farms	45	2.7
Other—cooperative, estate or trust, institutional, etc.	farms	147	2.2
	acres	4 453 855	.1
HIRED FARM LABOR[1]			
Hired workers by days worked:			
150 days or more	farms	1 746	3.3
	workers	5 683	1.8
Less than 150 days	farms	3 342	2.5
	workers	14 270	2.5
INJURIES AND DEATHS			
Farm-related injuries:			
Operator and family members	farms	112	2.2
	number	128	2.3
Hired workers	farms	95	1.1
	number	126	.9
Farm-related deaths:			
Operator and family members	farms	5	–
	number	(D)	(D)
Hired workers	farms	2	–
	number	(D)	(D)
FARMS BY SIZE			
1 to 9 acres		393	1.4
10 to 49 acres		710	1.1
50 to 69 acres		333	1.6
70 to 99 acres		414	1.5
100 to 139 acres		562	1.3
140 to 179 acres		377	1.6
180 to 219 acres		315	1.7
220 to 259 acres		296	1.7
260 to 499 acres		899	1.1
500 to 999 acres		709	1.1
1,000 to 1,999 acres		513	1.2
2,000 acres or more		663	.7
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			
Oilseed and grain farming (1111)		479	1.2
Vegetable and melon farming (1112)		104	2.4
Fruit and tree nut farming (1113)		100	2.7
Greenhouse, nursery, and floriculture production (1114)		189	1.7
Other crop farming (1119)		1 259	1.0
Beef cattle ranching and farming (112111)		2 563	.8
Cattle feedlots (112112)		168	2.1
Dairy cattle and milk production (11212)		607	.7
Hog and pig farming (1122)		53	3.4
Poultry and egg production (1123)		101	1.7
Sheep and goat farming (1124)		250	1.4
Animal aquaculture and other animal production (1125, 1129)		311	1.5
LIVESTOCK			
Cattle and calves inventory	farms	4 309	.6
	number	840 902	.4
Beef cows	farms	3 195	.7
	number	345 989	.6
Milk cows	farms	724	.7
	number	92 624	.2
Cattle and calves sold	farms	4 371	.6
	number	493 607	.4
	$1,000	248 958	.3
Hogs and pigs inventory	farms	230	1.7
	number	289 969	.2
Hogs and pigs sold	farms	193	1.9
	number	328 011	.3
	$1,000	40 234	.2
Sheep and lambs of all ages inventory	farms	642	1.1
	number	417 021	.4
Sheep and lambs sold	farms	610	1.1
	number	299 682	.4
Horses and ponies inventory	farms	2 911	.7
	number	24 184	.9
Horses and ponies sold	farms	544	1.2
	number	5 657	1.1

Table D. **Reliability Estimates of State Totals for Farms With Sales of $10,000 or More: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
POULTRY			
Layers and pullets 13 weeks old and older inventory (see text)	farms	126	2.4
	number	1 912 397	(L)
Layers 20 weeks old and older	farms	123	2.5
	number	1 721 717	(L)
Broilers and other meat-type chickens sold	farms	4	13.8
	number	(D)	(D)
SELECTED CROPS HARVESTED			
Corn for grain or seed	farms	335	1.4
	acres	16 812	.9
	bushels	2 489 469	.9
Corn for silage or green chop	farms	754	.8
	acres	37 495	.6
	tons, green	824 032	.5
Wheat for grain	farms	897	.8
	acres	174 922	.6
	bushels	7 609 501	.6
SELECTED CROPS HARVESTED—Con.			
Barley for grain	farms	1 465	.8
	acres	88 143	.7
	bushels	7 047 284	.6
Oats for grain	farms	332	1.5
	acres	7 678	2.1
	bushels	554 120	2.4
Potatoes, excluding sweetpotatoes	farms	63	3.3
	acres	3 220	1.1
	cwt	926 560	1.3
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms	4 638	.6
	acres	651 938	.5
	tons, dry	2 312 808	.5
Alfalfa hay	farms	4 219	.6
	acres	473 987	.5
	tons, dry	1 916 211	.5
Vegetables harvested for sale (see text)	farms	198	1.8
	acres	6 504	1.3
Land in orchards	farms	165	2.1
	acres	7 875	1.7

[1]Data are based on a sample of farms.
[2]Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table E. **Reliability Estimates of Percent Change in State Totals: 1992 to 1997**

[For meaning of abbreviations and symbols, see introductory text]

Item	All farms		Farms with sales of $10,000 or more	
	Percent change from 1992 to 1997	Standard error of estimate	Percent change from 1992 to 1997	Standard error of estimate
Farms ..... number	4.9	.8	4.0	.8
Land in farms ..... acres	24.9	.3	34.6	.3
Average size of farm ..... acres	19.1	1.0	29.4	1.1
Estimated market value of land and buildings[1]:				
Average per farm ..... dollars	39.7	3.5	41.4	4.3
Average per acre ..... dollars	17.1	3.1	9.1	3.4
Estimated market value of all machinery and equipment[1]:				
Average per farm ..... dollars	30.7	2.8	21.4	3.0
Farms by size:				
1 to 9 acres	14.5	1.5	5.6	2.2
10 to 49 acres	6.5	1.2	13.8	1.9
50 to 179 acres	2.2	.9	6.8	1.2
180 to 499 acres	–.7	1.1	1.5	1.1
500 to 999 acres	1.9	1.4	–.1	1.4
1,000 to 1,999 acres	11.0	1.3	4.9	1.3
2,000 acres or more	–5.9	.7	–3.2	.7
Total cropland ..... farms	4.5	.8	4.6	.8
acres	–1.1	.6	–1.2	.6
Harvested cropland ..... farms	2.2	.8	5.0	.9
acres	6.2	.6	7.8	.6
Irrigated land ..... farms	3.6	.8	5.5	.9
acres	6.1	.6	10.2	.7
Market value of agricultural products sold $1,000	21.0	.3	21.6	.3
Average per farm ..... dollars	15.3	1.0	16.9	1.0
Crops, including nursery and greenhouse crops $1,000	36.4	.6	37.9	.6
Livestock, poultry, and their products $1,000	15.8	.3	16.2	.3
Farms by value of sales:				
Less than $2,500	6.2	1.1	(X)	(X)
$2,500 to $4,999	6.6	1.5	(X)	(X)
$5,000 to $9,999	3.2	1.3	(X)	(X)
$10,000 to $24,999	2.4	1.2	2.4	1.1
$25,000 to $49,999	7.0	1.5	7.0	1.5
$50,000 to $99,999	–3.9	1.4	–3.9	1.4
$100,000 to $249,999	5.4	.7	5.4	.6
$250,000 to $499,999	–1.3	–	–1.3	–
$500,000 or more	42.2	–	42.2	–
Total farm production expenses[1] $1,000	16.0	.8	16.4	.9
Average per farm ..... dollars	10.7	1.3	11.6	1.5
Net cash return from agricultural sales for the farm unit (see text)[1] ..... farms	4.9	.9	4.3	1.1
$1,000	30.3	3.5	30.0	2.9
Average per farm ..... dollars	24.2	3.5	24.6	3.1
Operators by principal occupation:				
Farming	–4.5	.7	–2.7	.7
Other	13.0	1.1	18.6	1.4
Operators by days worked off farm:				
Any	7.2	1.0	8.4	1.1
200 days or more	8.1	1.1	12.5	1.4
Livestock and poultry:				
Cattle and calves inventory ..... farms	6.1	.8	4.1	.8
number	6.4	.5	6.1	.5
Beef cows ..... farms	8.3	.9	9.5	1.0
number	7.5	.7	7.0	.7
Milk cows ..... farms	–17.7	.8	–17.0	.7
number	15.7	.3	15.8	.3
Cattle and calves sold ..... farms	5.4	.8	4.3	.8
number	3.4	.5	2.7	.4
Hogs and pigs inventory ..... farms	–29.7	1.3	–26.3	1.7
number	579.9	7.5	667.6	8.9
Hogs and pigs sold ..... farms	–34.1	1.4	–29.6	1.8
number	438.2	6.6	488.7	7.6
Sheep and lambs inventory ..... farms	–16.4	1.0	–15.3	1.2
number	–15.6	.4	–13.9	.4
Layers and pullets 13 weeks old and older inventory (see text) ..... farms	–14.0	1.7	–15.4	2.7
number	8.0	(L)	8.1	(L)
Broilers and other meat-type chickens sold ..... farms	–9.5	8.5	–55.6	7.3
number	(D)	(D)	(D)	(D)
Selected crops harvested:				
Corn for silage or green chop ..... farms	–17.6	.9	–17.9	.9
acres	–7.1	.6	–6.2	.6
tons, green	6.0	.6	6.7	.6
Wheat for grain ..... farms	–9.9	1.0	–5.7	1.1
acres	2.8	.7	4.5	.6
bushels	24.4	.9	26.1	.9
Barley for grain ..... farms	–17.7	.8	–15.0	.8
acres	–9.7	.7	–8.1	.7
bushels	–5.8	.7	–4.6	.7
Oats for grain ..... farms	–29.4	1.2	–24.4	1.3
acres	–22.8	1.5	–19.8	1.8
bushels	–4.0	2.2	2.3	2.6
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) ..... farms	4.3	.8	6.8	.9
acres	12.1	.7	14.7	.7
tons, dry	22.2	.7	24.1	.7
Land in orchards ..... farms	–20.1	1.4	–30.7	1.9
acres	–20.8	1.4	–25.3	1.4

[1]Data are based on a sample of farms.

Table F. **Reliability Estimates for the State and County Totals: 1997**

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms		Land in farms		Average size of farm		Average market value of land and buildings per farm[1]		Estimated market value of all machinery and equipment[1]	
	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**14 181**	**.5**	**12 024 661**	**.2**	**848**	**.5**	**486 235**	**1.4**	**725 177**	**1.6**
Beaver	219	.6	130 994	.6	598	.9	649 388	4.8	14 023	4.4
Box Elder	1 077	.5	1 357 734	.5	1 261	.7	547 243	3.6	86 479	5.2
Cache	1 232	.5	266 374	1.2	216	1.3	329 665	4.1	73 794	4.6
Carbon	199	.5	201 679	1.5	1 013	1.6	611 966	7.0	6 967	7.1
Daggett	36	.5	26 485	2.3	736	2.3	471 861	4.4	1 890	3.0
Davis	559	.4	67 906	1.2	121	1.2	376 424	9.3	19 598	5.2
Duchesne	811	.6	1 328 307	.3	1 638	.7	520 668	3.6	35 525	6.2
Emery	450	.5	158 798	2.0	353	2.0	220 169	12.1	16 971	11.3
Garfield	285	.5	121 381	2.3	426	2.4	358 522	6.2	13 363	11.6
Grand	85	.6	75 801	1.3	892	1.5	438 883	4.1	3 583	4.0
Iron	375	.6	404 574	.9	1 079	1.1	609 316	4.7	29 796	6.6
Juab	228	.6	275 632	1.0	1 209	1.2	547 154	4.2	16 074	7.2
Kane	143	.4	175 384	1.7	1 226	1.7	625 669	5.6	4 743	5.6
Millard	650	.4	457 823	.9	704	1.0	504 256	5.4	56 129	6.2
Morgan	243	.3	179 246	.9	738	1.0	690 752	7.6	8 083	7.7
Piute	106	.8	44 540	2.3	420	2.4	376 592	10.8	6 961	10.3
Rich	162	.7	523 744	.7	3 233	1.0	853 906	3.8	14 557	5.8
Salt Lake	593	.6	113 912	1.2	192	1.3	431 460	6.3	23 126	9.9
San Juan	231	.4	1 673 079	.2	7 243	.4	1 786 989	3.3	13 744	8.2
Sanpete	776	.5	359 717	.9	464	1.0	339 022	4.7	47 994	7.5
Sevier	478	.5	147 032	1.5	308	1.6	235 044	4.9	19 211	4.5
Summit	476	.3	589 528	.7	1 239	.8	740 266	7.7	17 830	7.2
Tooele	332	.5	291 746	1.4	879	1.5	585 551	10.7	13 854	17.2
Uintah	795	.5	2 268 090	.2	2 853	.5	695 186	4.3	35 508	7.1
Utah	1 790	.4	374 933	1.1	209	1.1	433 198	5.7	71 455	4.4
Wasatch	294	.4	106 142	.7	361	.8	563 657	6.0	8 033	8.3
Washington	429	.6	163 135	2.8	380	2.9	418 213	11.1	15 981	13.2
Wayne	191	.7	59 593	1.6	312	1.8	319 677	4.5	8 469	4.8
Weber	936	.4	81 352	2.5	87	2.5	328 193	10.0	41 435	9.9

Geographic area	Average market value of all machinery and equipment per farm[1]		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses[1]			
							Total farm production expenses			
							Farms		Value	
	Value (dollars)	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**51 148**	**1.7**	**877 295**	**.2**	**61 864**	**.5**	**14 177**	**.5**	**699 532**	**.5**
Beaver	64 033	4.6	58 525	.2	267 239	.7	219	1.1	52 692	1.8
Box Elder	80 296	5.2	102 173	.3	94 868	.6	1 077	.6	82 460	2.0
Cache	59 897	4.7	104 809	.3	85 072	.5	1 232	.5	77 223	1.8
Carbon	35 009	7.2	3 622	2.2	18 200	2.2	199	1.4	3 685	4.3
Daggett	52 500	4.9	1 440	.8	40 000	.9	36	3.8	1 427	1.0
Davis	35 059	5.2	33 385	.5	59 722	.6	559	.6	24 481	2.3
Duchesne	43 805	6.2	27 568	1.0	33 992	1.2	811	.8	22 089	3.8
Emery	37 713	11.4	10 970	1.2	24 378	1.3	450	.8	8 375	6.6
Garfield	46 889	11.7	7 583	1.7	26 608	1.8	285	1.1	6 772	7.2
Grand	42 156	5.0	2 289	2.6	26 935	2.6	85	3.0	1 976	3.6
Iron	79 455	6.6	42 126	.3	112 336	.6	375	.8	27 574	1.4
Juab	70 499	7.2	8 353	1.1	36 635	1.2	228	1.1	8 186	6.6
Kane	33 170	5.9	3 230	2.4	22 590	2.4	143	1.8	2 332	3.4
Millard	86 353	6.3	71 047	.3	109 302	.5	650	.6	54 443	1.8
Morgan	33 265	7.8	13 213	.6	54 375	.6	243	1.0	8 832	3.0
Piute	65 670	10.5	7 216	1.3	68 071	1.5	106	2.0	5 203	5.1
Rich	89 857	6.1	15 538	.8	95 913	1.1	162	1.8	11 872	2.5
Salt Lake	38 999	9.9	22 983	.6	38 757	.8	593	.8	17 136	2.1
San Juan	59 757	8.3	9 097	.7	39 381	.8	230	.8	9 354	3.7
Sanpete	61 927	7.5	82 785	.3	106 682	.6	774	.8	79 752	.8
Sevier	40 190	4.6	39 668	.4	82 988	.6	478	.7	24 305	2.0
Summit	37 459	7.3	17 057	.7	35 834	.8	476	.8	12 095	4.0
Tooele	41 730	17.2	17 381	.7	52 353	.8	332	.9	15 418	4.6
Uintah	44 721	7.1	21 466	.8	27 001	.9	794	.7	17 683	3.6
Utah	39 919	4.4	97 009	.3	54 195	.5	1 790	.5	77 000	1.2
Wasatch	27 323	8.4	7 747	.7	26 351	.9	294	.9	5 802	5.0
Washington	37 251	13.2	9 342	1.5	21 777	1.7	429	.9	8 743	6.7
Wayne	44 342	5.1	11 200	.9	58 637	1.2	191	1.7	8 196	1.7
Weber	44 268	10.0	28 474	.5	30 420	.7	936	.6	24 427	3.3

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses[1]—Con.											
	Livestock and poultry purchased				Feed for livestock and poultry				Seeds, bulbs, plants, and trees			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**5 266**	**2.4**	**82 463**	**1.7**	**7 655**	**1.6**	**198 854**	**.6**	**5 288**	**2.2**	**17 281**	**2.2**
Beaver	89	13.5	3 839	10.2	129	12.0	27 835	.3	118	13.8	301	15.1
Box Elder	358	9.4	15 614	4.0	476	6.9	13 964	1.5	594	5.2	2 000	3.6
Cache	427	8.6	10 626	4.2	590	6.6	27 167	2.1	630	5.9	979	4.1
Carbon	63	11.2	366	9.1	107	7.3	893	12.7	65	12.0	39	10.9
Daggett	18	3.7	220	.1	23	3.9	83	1.4	2	–	(D)	(D)
Davis	165	16.5	998	14.8	312	8.9	872	6.1	204	10.3	4 847	2.4
Duchesne	314	11.0	2 754	14.9	550	5.5	3 892	4.7	192	13.2	211	15.0
Emery	177	14.4	939	19.7	226	10.1	1 779	6.1	179	11.2	196	16.3
Garfield	106	12.4	939	15.9	155	9.6	1 282	18.7	88	14.9	138	32.1
Grand	27	5.5	345	6.0	35	4.5	114	6.0	30	4.5	36	5.5
Iron	111	18.8	588	13.8	170	12.9	2 547	3.2	114	16.5	717	7.5
Juab	93	12.5	1 011	21.4	119	10.0	1 190	14.8	95	9.8	133	8.5
Kane	57	10.9	276	13.9	83	7.9	373	6.9	55	11.7	42	19.3
Millard	235	12.2	5 634	3.6	311	9.0	12 243	2.5	344	7.6	1 071	3.6
Morgan	124	10.1	1 015	7.0	118	9.4	2 227	5.0	57	17.6	76	15.9
Piute	40	13.9	423	5.7	70	7.9	1 873	2.9	45	14.0	84	11.7
Rich	94	7.7	1 623	11.5	113	5.9	1 734	3.4	58	8.6	94	9.1
Salt Lake	182	13.5	1 230	28.6	328	8.6	3 465	4.3	128	17.8	1 020	18.7
San Juan	59	15.7	940	3.5	112	9.7	1 372	6.5	105	9.9	148	10.2
Sanpete	391	7.9	9 544	3.2	496	5.9	45 280	1.4	313	8.4	499	9.5
Sevier	185	12.8	5 656	3.6	211	10.7	8 338	1.3	215	10.6	325	6.2
Summit	194	10.4	1 540	10.4	276	8.0	3 237	8.7	70	20.4	57	26.5
Tooele	125	15.3	1 173	19.6	172	10.5	5 808	2.6	85	18.7	77	24.8
Uintah	280	11.9	1 695	10.6	502	6.5	3 109	7.5	288	11.2	320	12.2
Utah	646	6.6	8 098	6.6	951	4.4	15 735	1.8	708	6.3	2 973	7.5
Wasatch	98	16.6	820	26.0	135	12.7	1 367	6.5	52	20.1	(D)	(D)
Washington	166	13.0	973	14.0	231	10.2	1 689	7.4	125	18.1	111	15.3
Wayne	86	7.9	798	4.5	103	6.7	2 896	1.5	66	9.7	60	13.6
Weber	356	9.7	2 784	10.4	551	5.9	6 492	5.9	263	10.4	703	20.6

Geographic area	Farm production expenses[1]—Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**7 097**	**1.8**	**22 174**	**2.9**	**5 883**	**2.0**	**9 374**	**3.3**	**13 082**	**.7**	**37 590**	**1.2**
Beaver	117	12.5	489	11.1	128	10.8	282	11.8	208	3.9	2 207	5.5
Box Elder	673	4.8	5 296	8.1	617	5.4	1 785	6.2	1 018	1.7	4 345	3.2
Cache	682	5.8	1 646	10.4	676	5.7	586	11.1	1 175	1.4	3 283	5.7
Carbon	115	7.4	133	10.3	68	10.8	40	8.0	180	3.3	338	5.8
Daggett	26	4.3	116	1.6	8	4.3	(D)	(D)	36	3.8	82	1.5
Davis	286	8.4	787	4.0	294	10.3	552	2.4	476	4.2	1 082	4.1
Duchesne	430	7.8	1 335	9.7	176	15.5	65	14.9	794	1.5	1 943	7.4
Emery	330	6.7	454	14.3	209	12.3	162	30.9	441	1.5	771	7.2
Garfield	170	9.1	171	14.0	68	16.8	26	15.2	264	3.2	628	11.1
Grand	43	4.0	61	4.5	30	5.0	16	7.5	72	3.2	145	4.5
Iron	160	12.0	1 271	4.3	154	13.3	810	5.5	326	5.3	1 422	3.5
Juab	103	12.3	397	9.7	111	11.2	288	7.0	196	3.7	995	4.3
Kane	67	9.5	48	11.1	51	9.7	52	21.7	133	3.2	277	5.8
Millard	356	7.4	2 167	5.7	384	6.5	1 269	16.5	623	2.2	3 271	4.0
Morgan	65	14.6	159	10.7	113	11.8	87	13.9	226	3.6	467	7.0
Piute	47	12.8	78	20.0	48	13.5	52	20.0	104	2.1	396	7.3
Rich	62	9.4	343	4.9	39	10.6	37	8.9	150	2.6	803	4.4
Salt Lake	197	14.6	455	4.7	213	12.8	299	7.8	520	3.4	922	6.1
San Juan	88	11.2	368	26.5	117	9.8	293	13.9	211	3.1	947	4.2
Sanpete	376	8.1	615	6.9	378	7.1	374	8.3	733	1.8	2 564	3.0
Sevier	260	9.1	592	14.9	213	9.3	208	6.5	444	3.2	926	3.3
Summit	160	11.6	203	11.9	100	15.4	38	14.1	420	3.0	761	5.0
Tooele	69	21.6	118	5.4	64	23.1	42	4.2	285	4.8	724	10.4
Uintah	421	8.1	922	8.9	230	13.3	101	10.3	719	2.7	1 446	5.9
Utah	974	4.7	2 873	12.3	785	5.7	1 470	10.8	1 643	1.7	4 036	5.1
Wasatch	133	13.7	88	20.5	69	19.4	(D)	(D)	261	3.4	335	10.6
Washington	192	12.2	258	6.8	118	16.5	82	22.7	385	3.8	652	10.2
Wayne	105	6.8	120	6.6	79	8.3	30	6.2	186	2.0	493	3.6
Weber	390	8.4	610	10.8	343	9.5	227	10.8	853	2.2	1 328	5.6

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses[1]—Con.											
	Electricity				Hired farm labor				Contract labor			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**7 182**	**1.7**	**16 687**	**1.8**	**6 059**	**2.0**	**79 611**	**1.0**	**1 698**	**4.5**	**7 900**	**3.3**
Beaver	115	10.7	1 644	5.9	123	9.9	5 134	2.3	45	17.2	142	10.2
Box Elder	686	4.5	1 914	6.9	561	5.9	8 556	2.4	146	16.7	452	9.9
Cache	725	5.0	1 415	6.9	572	5.6	7 681	3.0	99	16.3	790	4.0
Carbon	86	8.3	29	11.1	60	10.9	312	7.6	11	26.0	34	13.2
Daggett	27	4.2	16	2.2	14	3.8	88	.1	3	–	4	–
Davis	240	10.4	358	6.1	257	10.2	5 474	4.3	43	32.6	315	1.4
Duchesne	515	6.4	495	10.4	334	10.5	1 140	10.0	56	26.7	187	12.6
Emery	153	13.5	96	17.5	180	13.8	730	10.9	76	20.2	83	20.0
Garfield	78	14.3	78	18.9	108	12.4	497	7.4	36	28.1	129	50.3
Grand	38	4.5	44	8.4	27	5.2	283	7.0	15	7.6	81	6.6
Iron	206	10.7	2 667	5.0	135	14.5	5 207	1.6	83	21.2	318	13.0
Juab	92	9.1	133	9.6	98	10.4	645	3.6	21	31.7	62	6.2
Kane	51	13.0	53	25.6	48	13.1	149	5.8	5	33.8	3	12.4
Millard	355	6.7	2 156	5.3	322	8.2	5 993	1.6	126	16.7	921	17.8
Morgan	122	10.1	135	8.1	109	9.8	1 241	5.0	48	18.8	305	11.9
Piute	56	10.5	99	8.2	52	11.5	490	2.2	20	24.0	64	12.1
Rich	117	5.0	189	9.7	103	6.4	1 505	3.3	19	15.8	198	.5
Salt Lake	287	9.6	361	5.8	200	12.7	2 738	4.3	46	30.3	337	11.5
San Juan	124	8.4	113	4.9	69	15.3	994	9.3	27	25.4	87	18.8
Sanpete	408	7.1	611	3.6	422	7.1	4 980	2.7	107	16.0	299	14.9
Sevier	261	9.4	323	6.7	239	10.6	1 916	2.5	74	24.8	90	22.5
Summit	188	10.5	193	8.2	208	8.5	1 663	7.5	33	31.3	139	34.9
Tooele	140	11.9	384	19.2	114	14.2	1 863	2.1	61	22.6	215	50.9
Uintah	359	8.8	382	11.9	284	11.8	1 694	5.9	118	19.8	228	19.2
Utah	941	4.9	1 885	1.9	720	6.2	13 410	3.5	206	13.3	2 056	4.3
Wasatch	105	15.3	137	12.0	109	12.6	479	5.8	29	27.4	60	10.5
Washington	153	12.5	204	19.4	148	14.2	962	36.9	28	39.7	86	11.0
Wayne	109	6.2	157	5.4	86	7.7	796	2.8	26	18.7	57	12.6
Weber	445	7.5	418	6.4	357	9.0	2 991	4.9	91	22.9	157	18.2

Geographic area	Farm production expenses[1]—Con.											
	Repair and maintenance				Customwork, machine hire, and rental of machinery and equipment				Interest			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**11 109**	**1.1**	**45 915**	**1.4**	**4 592**	**2.5**	**11 281**	**3.0**	**5 163**	**2.2**	**50 664**	**1.8**
Beaver	192	4.8	1 629	3.0	70	17.7	414	7.8	152	9.1	5 399	3.5
Box Elder	879	3.1	6 087	3.8	472	7.1	1 790	5.2	499	6.6	5 575	3.2
Cache	1 002	3.4	4 946	3.9	525	7.1	805	7.8	424	7.8	5 409	7.5
Carbon	168	3.8	345	4.2	32	16.4	30	30.2	66	10.6	282	9.7
Daggett	33	4.0	112	2.9	6	9.6	13	6.7	24	3.3	234	2.1
Davis	439	5.2	1 516	6.6	189	12.5	264	13.5	138	17.0	1 060	8.4
Duchesne	607	4.8	2 141	8.2	183	15.9	301	13.5	377	9.1	3 343	12.7
Emery	370	5.4	797	10.9	90	21.0	152	23.2	100	18.5	589	16.8
Garfield	227	5.8	453	11.0	66	19.4	155	31.8	124	10.0	719	18.1
Grand	62	3.5	217	3.5	17	6.5	28	4.4	24	5.6	102	6.3
Iron	267	7.1	2 554	2.8	154	14.6	609	15.1	162	10.1	2 428	5.1
Juab	168	6.0	821	13.5	64	14.5	352	4.6	89	13.3	591	7.9
Kane	113	3.9	264	12.5	53	12.9	27	19.2	58	10.9	230	15.7
Millard	543	4.0	3 960	4.1	329	7.0	1 883	12.3	319	8.7	3 817	5.7
Morgan	164	7.7	840	14.5	80	13.8	122	23.0	71	13.2	496	7.5
Piute	100	3.2	285	6.5	42	15.1	74	17.8	61	6.9	552	21.2
Rich	138	3.3	695	5.3	58	10.5	170	7.9	108	6.4	1 693	4.8
Salt Lake	466	5.0	1 540	9.4	144	18.7	188	9.4	129	18.2	743	10.5
San Juan	171	6.7	769	5.9	98	11.8	270	18.0	97	9.4	970	6.1
Sanpete	622	3.9	2 554	4.7	233	11.6	698	12.2	358	8.3	3 602	8.5
Sevier	389	4.9	1 226	7.5	210	11.1	369	11.8	208	9.4	1 584	10.1
Summit	352	5.2	928	14.5	112	15.7	251	10.6	152	11.6	695	13.6
Tooele	243	7.2	1 102	11.5	70	21.6	168	24.6	110	15.8	1 000	9.6
Uintah	633	4.2	1 597	7.6	142	16.7	251	19.8	319	10.5	1 988	11.1
Utah	1 330	3.1	5 099	4.5	646	7.2	1 007	6.0	533	7.3	4 374	4.4
Wasatch	222	6.1	537	11.7	83	18.3	77	19.9	57	19.2	501	20.2
Washington	328	6.4	754	11.6	85	19.6	276	12.6	125	12.9	798	15.1
Wayne	161	3.8	505	4.4	80	8.8	135	10.1	81	6.9	550	9.4
Weber	720	3.8	1 641	6.2	259	12.3	403	14.8	198	13.2	1 340	7.3

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses[1]—Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Utah	**3 565**	**2.9**	**19 126**	**3.3**	**13 527**	**.6**	**16 505**	**1.5**	**12 863**	**.8**	**84 106**	**1.1**
Beaver	49	25.4	173	19.6	211	3.5	568	3.3	216	1.2	2 638	7.9
Box Elder	405	7.7	4 212	10.9	1 004	2.0	1 613	3.7	992	2.1	9 257	3.3
Cache	319	10.3	2 039	12.9	1 194	1.3	1 665	4.1	1 130	2.3	8 185	2.9
Carbon	38	16.5	93	10.3	195	1.9	155	5.7	188	2.4	596	8.2
Daggett	11	7.1	164	1.4	31	3.8	31	2.5	35	3.8	217	1.9
Davis	148	12.7	768	9.2	510	3.6	748	7.0	496	4.0	4 841	1.4
Duchesne	194	13.8	494	20.4	768	2.2	678	5.7	755	2.8	3 109	6.1
Emery	90	22.9	244	47.7	440	2.0	317	8.3	413	3.6	1 065	8.1
Garfield	76	15.9	193	21.5	266	3.3	216	11.4	254	4.2	1 146	7.8
Grand	9	7.9	31	8.6	82	3.0	112	3.8	78	3.1	362	3.7
Iron	102	20.0	1 466	2.8	357	3.3	584	5.6	321	4.0	4 387	3.6
Juab	79	13.3	224	16.6	223	1.6	262	7.3	210	2.7	1 081	6.7
Kane	27	17.5	107	28.6	141	1.8	102	6.0	125	3.8	330	5.3
Millard	197	12.0	1 234	12.7	616	2.2	869	3.7	587	2.4	7 953	3.9
Morgan	34	21.2	325	5.1	243	1.0	263	6.6	201	5.6	1 073	5.8
Piute	18	27.7	100	38.7	105	2.0	117	4.9	104	2.2	515	4.6
Rich	57	8.5	508	10.5	152	3.0	278	4.7	151	3.0	2 001	7.8
Salt Lake	138	17.9	659	13.3	550	3.0	558	10.9	542	3.3	2 621	5.3
San Juan	54	14.2	537	14.0	222	2.4	287	7.5	204	4.7	1 259	7.1
Sanpete	210	11.4	1 119	9.4	745	1.8	834	6.3	717	2.1	6 177	2.7
Sevier	144	14.9	515	8.1	452	3.0	345	6.0	430	3.6	1 894	2.5
Summit	112	15.4	373	7.9	463	1.8	466	11.3	418	2.9	1 551	2.7
Tooele	84	17.1	284	24.1	315	2.8	537	10.6	282	4.3	1 925	14.1
Uintah	128	17.0	424	18.8	776	1.5	774	6.3	750	2.3	2 753	7.6
Utah	461	8.7	1 680	7.5	1 716	1.2	2 150	5.0	1 629	1.8	10 153	2.5
Wasatch	99	14.7	235	12.5	288	1.7	350	5.2	239	5.6	740	10.7
Washington	70	23.4	207	11.7	391	3.2	393	16.6	384	4.3	1 298	15.0
Wayne	29	15.9	78	10.0	183	2.5	165	10.5	172	3.0	1 356	3.1
Weber	183	14.6	640	6.8	888	1.8	1 068	7.3	840	2.7	3 624	7.2

Geographic area	Net cash return from agricultural sales for the farm unit (see text)[1]				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Utah	**14 178**	**.5**	**160 519**	**2.0**	**12 227**	**.5**	**2 069 751**	**.5**	**10 393**	**.5**	**1 107 928**	**.4**
Beaver	219	1.1	6 351	7.3	194	.9	39 463	1.0	171	1.1	28 209	.9
Box Elder	1 077	.6	17 872	3.9	960	.6	343 797	1.0	832	.7	174 615	.7
Cache	1 232	.5	25 696	5.0	1 110	.5	177 117	1.1	976	.6	119 910	.8
Carbon	199	1.4	183	96.9	171	1.1	17 200	3.2	148	1.4	6 060	2.2
Daggett	36	3.8	13	44.9	33	1.4	13 128	2.5	31	2.0	7 676	2.9
Davis	559	.6	7 072	5.0	464	.7	27 034	2.1	383	.9	17 808	1.2
Duchesne	811	.8	4 022	20.7	721	.7	125 134	1.6	612	.9	56 971	1.3
Emery	450	.8	1 902	22.2	406	.7	53 303	1.8	358	.9	20 922	1.6
Garfield	285	1.1	418	69.9	248	.9	36 386	2.6	213	1.2	14 565	2.9
Grand	85	3.0	314	6.7	77	1.0	6 001	3.2	64	2.0	3 254	3.0
Iron	375	.8	13 268	4.4	301	.9	71 013	.9	262	1.1	53 457	.7
Juab	228	1.1	196	(H)	209	.9	66 400	2.0	176	1.3	29 998	1.9
Kane	143	1.8	551	36.1	111	1.2	15 224	4.8	87	1.8	3 210	3.4
Millard	650	.6	16 785	6.7	573	.6	162 805	1.0	518	.7	94 530	.8
Morgan	243	1.0	3 068	7.1	197	.8	21 609	2.5	171	1.0	14 696	1.9
Piute	106	2.0	1 604	9.7	99	1.0	21 278	2.5	92	1.4	10 934	2.2
Rich	162	1.8	3 962	9.0	145	1.1	87 335	1.3	132	1.3	52 983	1.5
Salt Lake	593	.8	6 899	10.2	414	1.0	40 035	1.3	305	1.3	20 319	1.2
San Juan	230	.8	–213	(H)	203	.8	150 143	1.0	159	1.2	53 772	.9
Sanpete	775	.8	2 178	30.4	667	.7	113 436	1.2	565	.8	60 783	1.2
Sevier	478	.7	12 744	2.9	426	.6	49 723	1.4	371	.8	34 169	1.4
Summit	476	.8	4 050	11.7	382	.7	40 345	2.2	312	.9	20 435	1.4
Tooele	332	.9	1 780	28.3	273	.9	41 924	2.8	231	1.2	16 966	2.4
Uintah	794	.7	2 386	27.6	692	.6	90 524	1.3	556	.8	44 954	1.2
Utah	1 790	.5	17 829	5.3	1 582	.5	149 920	1.0	1 351	.6	86 976	.7
Wasatch	294	.9	1 524	16.3	267	.7	16 569	1.8	220	1.1	9 295	1.9
Washington	429	.9	563	(H)	348	.9	34 916	3.7	270	1.3	10 321	3.9
Wayne	191	1.7	3 019	5.1	167	1.1	18 328	1.9	161	1.2	13 667	1.6
Weber	936	.6	4 483	25.5	787	.6	39 661	1.6	666	.7	26 473	1.1

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Irrigated land				Livestock and poultry							
	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
					Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Utah	**11 291**	**.5**	**1 212 201**	**.5**	**7 986**	**.5**	**916 090**	**.4**	**5 749**	**.6**	**383 790**	**.6**
Beaver	192	.9	35 177	.8	133	1.6	33 060	1.4	106	1.8	13 403	1.6
Box Elder	799	.7	137 074	.6	537	1.0	101 522	.6	348	1.3	37 332	1.0
Cache	884	.7	93 008	.8	705	.8	76 424	.7	321	1.5	9 785	2.1
Carbon	173	1.0	10 588	1.8	113	2.1	10 299	2.0	95	2.4	6 629	2.2
Daggett	33	.5	7 840	2.7	29	2.6	4 334	1.4	25	3.3	(D)	(D)
Davis	454	.7	21 907	1.4	185	1.7	8 762	2.3	121	2.3	3 412	3.6
Duchesne	723	.7	114 790	1.2	636	.8	62 078	1.2	528	1.0	34 499	1.3
Emery	413	.7	41 198	1.6	320	1.1	28 456	1.9	286	1.2	15 057	1.8
Garfield	252	.9	25 406	2.5	213	1.2	21 791	2.6	175	1.5	12 663	2.6
Grand	66	1.7	4 472	4.6	39	3.4	4 195	6.7	31	4.2	(D)	(D)
Iron	295	1.0	60 400	1.1	205	1.5	22 110	1.2	151	1.9	10 414	1.5
Juab	159	1.5	22 236	2.1	133	1.9	17 679	2.1	109	2.2	(D)	(D)
Kane	99	1.4	7 198	6.4	107	1.2	10 436	2.2	101	1.4	7 081	2.7
Millard	525	.7	99 248	.8	378	1.0	64 414	.8	274	1.3	19 963	1.2
Morgan	167	1.1	8 836	1.8	130	1.5	10 858	1.5	84	2.2	4 785	2.1
Piute	99	1.1	14 257	2.6	87	1.7	12 029	2.8	74	2.1	5 825	3.9
Rich	141	1.2	74 559	1.6	124	1.5	53 741	1.1	117	1.7	33 509	1.0
Salt Lake	386	1.1	14 647	2.0	198	1.9	7 762	2.0	129	2.5	3 185	2.8
San Juan	93	2.0	9 078	2.1	122	1.5	22 009	1.3	112	1.7	12 845	1.3
Sanpete	628	.7	72 315	1.3	452	1.0	54 994	1.1	358	1.3	19 800	1.7
Sevier	419	.7	43 728	1.4	272	1.2	46 330	.9	174	1.8	12 266	1.8
Summit	358	.8	28 429	1.5	286	1.0	29 342	.9	225	1.3	16 682	1.0
Tooele	237	1.2	18 944	1.7	215	1.3	20 051	1.9	179	1.6	(D)	(D)
Uintah	686	.6	83 939	1.4	552	.8	50 631	1.2	470	1.0	28 425	1.3
Utah	1 484	.5	81 168	.9	836	.9	65 586	1.0	528	1.2	21 227	1.6
Wasatch	270	.7	15 424	1.6	147	1.7	9 389	1.9	76	2.9	2 651	3.2
Washington	332	1.0	16 057	3.6	266	1.3	17 715	2.7	212	1.6	10 447	2.6
Wayne	166	1.1	17 627	1.9	133	1.7	21 582	1.9	98	2.3	9 678	2.4
Weber	758	.6	32 651	2.0	433	1.1	28 511	1.0	242	1.7	5 858	2.9

Geographic area	Livestock and poultry—Con.											
	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Utah	**891**	**.7**	**92 953**	**.2**	**511**	**1.3**	**292 472**	**.2**	**1 438**	**.8**	**438 678**	**.4**
Beaver	22	4.0	3 159	1.2	17	4.2	263 047	(L)	6	12.1	190	16.0
Box Elder	75	2.0	8 941	.4	45	3.6	3 764	1.3	102	2.5	70 004	.3
Cache	231	1.1	24 654	.4	41	4.0	13 453	.8	53	3.9	5 267	1.3
Carbon	10	8.2	84	15.8	6	12.9	77	7.8	39	4.6	8 945	.8
Daggett	1	–	(D)	(D)	1	43.3	(D)	(D)	3	14.4	393	7.7
Davis	8	8.6	715	4.6	10	9.9	(D)	(D)	43	4.1	4 160	1.5
Duchesne	52	3.6	2 798	2.3	27	6.3	687	25.8	70	3.6	10 156	2.1
Emery	20	6.2	753	1.7	23	6.3	134	13.1	59	3.9	7 120	4.9
Garfield	12	8.0	378	4.4	7	13.1	131	27.1	36	4.6	3 241	1.9
Grand	1	27.6	(D)	(D)	2	19.4	(D)	(D)	6	9.7	(D)	(D)
Iron	17	5.0	2 903	.2	17	7.0	233	11.6	85	2.8	42 950	1.6
Juab	3	18.2	(D)	(D)	8	13.0	100	18.2	26	6.3	12 500	2.2
Kane	6	7.6	28	20.3	2	16.5	(D)	(D)	13	6.1	1 971	6.6
Millard	55	2.2	11 177	.3	22	6.3	1 189	8.4	37	4.2	10 458	.5
Morgan	13	2.6	1 376	1.2	7	8.5	39	10.0	30	3.6	18 637	1.1
Piute	14	3.8	1 861	1.1	1	49.7	(D)	(D)	14	8.4	3 625	7.4
Rich	3	10.5	5	6.3	1	31.4	(D)	(D)	16	6.7	11 852	1.1
Salt Lake	16	7.4	886	1.0	19	7.5	585	11.5	56	4.2	4 987	2.0
San Juan	8	8.7	96	1.6	9	7.5	28	8.7	7	8.3	(D)	(D)
Sanpete	45	3.6	6 507	.8	37	4.8	503	6.1	182	1.9	67 526	1.2
Sevier	30	3.8	4 969	.8	27	5.0	638	6.1	53	3.8	5 686	6.2
Summit	21	4.2	1 447	1.3	10	8.3	46	12.9	71	2.7	41 605	.7
Tooele	10	8.5	(D)	(D)	14	8.5	1 276	5.7	39	4.5	7 908	1.1
Uintah	33	4.6	1 570	2.1	32	5.1	637	15.6	101	2.7	16 675	2.2
Utah	82	2.5	8 745	.6	77	3.3	4 554	9.2	155	2.2	43 054	1.3
Wasatch	16	4.5	1 484	.7	10	7.6	55	11.5	41	4.0	16 417	.4
Washington	18	7.2	68	13.4	14	8.2	250	19.8	11	9.5	97	12.7
Wayne	18	5.7	1 874	1.1	3	12.3	(D)	(D)	32	5.3	8 478	5.3
Weber	51	2.2	6 059	.7	22	6.2	497	10.8	52	3.6	8 693	.5

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry—Con.							
	Layers 20 weeks old and older inventory				Broilers and other meat-type chickens sold			
	Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Utah	**527**	**1.4**	**1 729 365**	**(L)**	**19**	**6.9**	**(D)**	**(D)**
Beaver	7	11.3	108	11.8	–	–	–	–
Box Elder	31	4.8	2 704	1.8	–	–	–	–
Cache	27	5.2	(D)	(D)	1	28.4	(D)	(D)
Carbon	7	12.7	102	16.0	–	–	–	–
Daggett	–	–	–	–	–	–	–	–
Davis	15	6.8	141	9.2	–	–	–	–
Duchesne	26	6.3	387	7.1	2	18.0	(D)	(D)
Emery	30	5.4	505	6.4	–	–	–	–
Garfield	14	8.4	223	11.0	–	–	–	–
Grand	3	20.8	(D)	(D)	–	–	–	–
Iron	22	6.2	794	20.2	1	36.1	(D)	(D)
Juab	8	12.9	162	15.7	–	–	–	–
Kane	10	6.1	136	6.3	–	–	–	–
Millard	28	5.5	664	7.6	–	–	–	–
Morgan	6	9.4	112	10.9	–	–	–	–
Piute	3	17.4	15	19.3	–	–	–	–
Rich	3	14.1	98	10.9	–	–	–	–
Salt Lake	36	5.4	(D)	(D)	6	12.2	113	14.7
San Juan	4	12.9	67	15.8	–	–	–	–
Sanpete	19	7.4	350	8.6	2	22.1	(D)	(D)
Sevier	18	6.3	505	16.2	–	–	–	–
Summit	12	8.0	198	13.5	–	–	–	–
Tooele	16	7.6	(D)	(D)	–	–	–	–
Uintah	32	5.2	412	6.3	2	22.2	(D)	(D)
Utah	69	3.5	405 963	(L)	2	21.7	(D)	(D)
Wasatch	11	7.8	181	10.2	1	31.1	(D)	(D)
Washington	29	5.7	1 206	22.9	–	–	–	–
Wayne	4	16.7	140	20.5	–	–	–	–
Weber	37	4.6	2 695	21.2	2	19.2	(D)	(D)

Geographic area	Selected crops harvested											
	Corn for silage or green chop						Wheat for grain					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, green	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Utah	**855**	**.9**	**38 495**	**.6**	**840 576**	**.5**	**1 148**	**.8**	**182 372**	**.6**	**7 832 313**	**.6**
Beaver	26	3.6	1 423	1.8	30 472	1.3	1	31.7	(D)	(D)	(D)	(D)
Box Elder	108	1.8	5 955	1.1	140 979	1.0	413	1.1	74 665	1.0	3 940 326	.9
Cache	124	1.5	6 022	.7	137 723	.8	216	1.8	18 072	1.9	886 917	1.6
Carbon	13	7.8	408	5.0	5 320	5.6	4	12.2	29	12.2	(D)	(D)
Daggett	–	–	–	–	–	–	–	–	–	–	–	–
Davis	20	5.1	873	3.0	22 470	2.9	65	2.6	3 089	1.1	259 719	1.0
Duchesne	26	4.6	1 100	2.4	19 938	1.8	6	15.1	67	17.7	4 270	23.4
Emery	42	4.7	1 098	4.4	18 353	4.6	5	14.4	29	15.0	1 390	8.5
Garfield	1	–	(D)	(D)	(D)	(D)	3	12.0	(D)	(D)	2 720	12.6
Grand	1	24.2	(D)	(D)	(D)	(D)	1	–	(D)	(D)	(D)	(D)
Iron	7	5.2	530	1.5	12 750	.9	6	11.5	288	9.0	13 728	3.8
Juab	17	6.2	457	4.8	8 700	6.4	43	4.2	5 304	3.9	239 913	3.0
Kane	1	–	(D)	(D)	(D)	(D)	1	27.0	(D)	(D)	(D)	(D)
Millard	72	2.5	3 465	1.5	72 069	1.2	60	2.9	5 035	2.9	356 652	2.0
Morgan	7	5.1	178	2.7	3 275	3.6	15	5.0	2 330	2.2	68 225	2.3
Piute	3	12.9	97	4.0	(D)	(D)	–	–	–	–	–	–
Rich	–	–	–	–	–	–	4	18.7	146	20.2	7 100	24.1
Salt Lake	9	10.1	296	9.3	7 270	9.1	14	6.3	8 597	.5	270 757	.9
San Juan	3	6.2	(D)	(D)	(D)	(D)	80	2.0	38 138	1.1	637 070	1.7
Sanpete	35	4.4	1 866	2.8	36 559	4.4	37	4.4	1 097	6.2	68 417	6.5
Sevier	61	2.8	3 161	2.2	71 551	1.5	1	33.1	(D)	(D)	(D)	(D)
Summit	–	–	–	–	–	–	2	14.4	(D)	(D)	(D)	(D)
Tooele	6	10.0	136	10.5	2 830	15.1	9	9.9	697	7.3	50 675	3.9
Uintah	54	3.2	2 374	1.8	48 461	1.7	4	11.3	(D)	(D)	(D)	(D)
Utah	136	2.2	4 873	2.3	105 671	2.2	71	3.1	20 584	.5	806 014	.7
Wasatch	–	–	–	–	–	–	–	–	–	–	–	–
Washington	3	11.5	(D)	(D)	(D)	(D)	4	16.3	(D)	(D)	(D)	(D)
Wayne	4	12.9	(D)	(D)	(D)	(D)	–	–	–	–	–	–
Weber	76	2.5	3 269	1.4	78 188	1.3	83	2.7	2 320	2.5	169 533	2.6

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested—Con.											
	Barley for grain						Oats for grain					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Utah	**1 929**	**.7**	**94 072**	**.6**	**7 422 580**	**.6**	**481**	**1.3**	**9 208**	**1.7**	**643 121**	**2.0**
Beaver	15	4.7	590	2.9	54 066	2.3	6	10.7	286	9.5	23 042	11.2
Box Elder	206	1.6	12 196	1.3	983 722	1.1	26	4.4	1 056	5.1	85 447	5.8
Cache	483	1.0	29 581	1.1	2 110 959	1.0	46	3.6	871	4.6	70 482	5.7
Carbon	1	35.0	(D)	(D)	(D)	(D)	9	8.8	128	8.1	10 420	8.0
Daggett	–	–	–	–	–	–	–	–	–	–	–	–
Davis	42	3.3	964	2.7	77 171	2.2	13	8.1	117	11.7	6 591	9.6
Duchesne	42	4.3	1 565	5.5	131 503	6.3	29	5.5	555	6.9	35 207	7.5
Emery	12	9.4	158	11.0	6 900	11.4	59	3.9	910	8.4	59 490	10.8
Garfield	3	13.1	(D)	(D)	(D)	(D)	6	12.3	104	18.1	5 235	20.7
Grand	–	–	–	–	–	–	2	12.1	(D)	(D)	(D)	(D)
Iron	32	3.8	2 059	1.6	178 349	1.2	11	7.7	236	16.1	12 907	15.3
Juab	58	3.5	2 419	2.6	187 593	2.6	10	9.1	100	14.1	6 030	14.0
Kane	1	27.0	(D)	(D)	(D)	(D)	3	9.0	31	7.0	(D)	(D)
Millard	192	1.6	13 328	1.6	1 132 115	1.5	26	4.8	692	6.7	58 949	7.2
Morgan	31	3.4	1 425	2.0	120 002	1.8	9	5.8	172	7.4	15 191	6.7
Piute	4	15.3	98	15.1	10 650	15.3	5	16.2	69	17.5	6 006	18.4
Rich	20	6.2	926	6.1	65 595	6.8	8	10.5	316	16.2	25 028	19.2
Salt Lake	34	4.4	2 996	2.4	210 183	3.5	8	8.9	93	5.5	7 430	7.4
San Juan	4	10.5	135	1.6	2 020	.4	8	7.7	538	3.8	20 900	3.0
Sanpete	158	2.0	7 304	1.7	646 208	1.8	37	4.7	523	5.2	33 469	5.7
Sevier	67	3.3	2 339	3.6	225 186	4.3	13	7.7	277	3.9	8 101	5.0
Summit	8	6.4	481	5.1	33 281	3.8	9	6.1	118	7.3	10 899	6.8
Tooele	38	4.6	1 287	5.4	90 589	3.5	7	13.9	90	18.4	4 021	15.1
Uintah	29	4.9	1 548	4.0	108 616	4.6	33	4.4	776	3.8	50 537	4.8
Utah	319	1.5	8 761	2.2	742 956	2.4	50	4.0	439	4.2	26 762	3.9
Wasatch	27	4.7	862	3.0	61 937	3.6	4	13.5	56	21.9	3 590	22.5
Washington	6	12.9	157	20.7	12 180	21.1	3	17.0	(D)	(D)	1 628	15.1
Wayne	22	6.6	421	9.7	37 170	9.5	13	8.6	107	9.2	7 270	9.3
Weber	75	2.8	1 860	2.4	146 099	2.2	28	5.1	519	5.3	46 969	4.5

Geographic area	Selected crops harvested—Con.									
	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)						Land in orchards			
	Farms		Acres		Quantity		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Utah	**9 033**	**.5**	**740 740**	**.5**	**2 533 360**	**.5**	**631**	**1.2**	**10 162**	**1.5**
Beaver	160	1.2	26 546	.9	109 141	1.0	2	17.2	(D)	(D)
Box Elder	607	.9	65 882	.7	250 095	.6	91	3.1	1 465	4.2
Cache	868	.7	67 915	.9	226 345	.8	19	5.7	75	5.7
Carbon	132	1.7	5 266	2.1	16 065	2.4	5	12.5	17	13.1
Daggett	31	2.0	7 574	2.9	13 855	1.3	–	–	–	–
Davis	277	1.2	7 607	2.4	27 426	2.5	44	4.1	198	5.8
Duchesne	595	.9	53 372	1.3	164 869	1.5	5	14.4	7	15.0
Emery	343	1.0	18 323	1.6	57 377	1.6	9	10.4	56	25.6
Garfield	207	1.3	13 852	3.0	41 074	2.8	6	14.4	22	20.1
Grand	41	3.1	2 664	3.6	9 661	3.6	16	7.1	90	9.3
Iron	246	1.2	49 292	.8	245 335	.6	7	11.2	18	13.1
Juab	163	1.4	21 607	2.4	64 949	2.2	3	21.6	2	24.8
Kane	76	2.1	3 099	3.6	8 639	2.9	13	6.4	51	8.7
Millard	488	.8	69 737	.8	278 911	.8	2	24.7	(D)	(D)
Morgan	159	1.2	10 414	2.6	29 136	1.6	1	25.5	(D)	(D)
Piute	86	1.6	10 301	2.4	31 146	3.1	–	–	–	–
Rich	127	1.4	52 009	1.5	92 781	1.8	–	–	–	–
Salt Lake	222	1.7	7 135	2.9	27 877	3.2	28	6.3	105	13.1
San Juan	96	1.9	8 230	2.0	19 786	2.3	11	8.0	46	8.9
Sanpete	535	.9	51 313	1.3	180 947	1.2	5	14.0	10	15.3
Sevier	357	.9	28 140	1.5	111 438	1.4	4	13.1	17	15.8
Summit	303	1.0	19 787	1.4	41 373	1.3	1	29.1	(D)	(D)
Tooele	218	1.3	14 215	2.4	47 818	2.4	9	11.3	10	13.8
Uintah	537	.9	38 621	1.3	134 445	1.5	2	15.3	(D)	(D)
Utah	1 032	.7	39 758	1.1	140 315	1.0	233	1.8	7 008	1.6
Wasatch	215	1.1	8 448	2.0	25 170	2.0	–	–	–	–
Washington	202	1.7	8 878	4.3	28 737	4.2	66	3.5	650	10.6
Wayne	146	1.4	12 889	1.6	44 910	1.7	10	9.5	78	20.7
Weber	564	.9	17 866	1.3	63 739	1.2	39	4.6	204	6.3

[1]Data are based on a sample of farms.

Table G. **Coverage Estimates: 1997**

[For meaning of abbreviations and symbols, see introductory text]

Item	Census total	Coverage total[1]	Adjusted census: Total	Adjusted census: Relative standard error (percent)	Coverage adjustment (percent)
Farms ..... number	14 181	1 704	15 885	2.9	10.7
Land in farms ..... acres	12 024 661	–49 587	11 975 074	1.3	–.4
Average size of farm ..... acres	848	–29	754	(X)	(X)
Farms by size of farm:					
Less than 10 acres	2 590	852	3 442	7.6	24.8
10 to 49 acres	3 978	710	4 688	5.3	15.1
50 to 179 acres	3 245	103	3 348	4.2	3.1
180 acres or more	4 368	39	4 407	1.7	.9
Farms by value of sales:					
Less than $2,500	4 226	1 137	5 363	8.2	21.2
$2,500 to $9,999	3 771	351	4 122	3.2	8.5
$10,000 or more	6 184	216	6 400	2.5	3.4
Market value of agricultural products sold $1,000	877 295	–826	876 469	1.8	–.1
Farms by type of organization:					
Individual or family	11 503	1 686	13 189	3.4	12.8
Partnership, corporation, or other	2 678	18	2 696	3.2	.7
Farms by tenure of operator:					
Full owners	8 924	1 301	10 225	4.3	12.7
Part owners	4 282	283	4 565	2.3	6.2
Tenants	975	120	1 095	7.2	11.0
Operators by place of residence:					
On farm operated	9 194	1 086	10 280	3.6	10.6
Not on farm operated	4 206	312	4 518	4.4	6.9
Not reported	781	306	1 087	10.1	28.2
Operators by principal occupation:					
Farming	5 987	239	6 226	2.1	3.8
Other	8 194	1 465	9 659	4.4	15.2
Operators by sex:					
Male	13 449	1 530	14 979	2.7	10.2
Female	732	174	906	12.4	19.2
Operators by race:					
White	14 067	1 661	15 728	2.9	10.6
Black and other races	114	43	157	65.0	27.4
Operators by years on present farm:					
4 years or less	1 629	348	1 977	8.8	17.6
5 years or more	10 266	1 137	11 403	3.7	10.0
Not reported	2 286	219	2 505	5.6	8.7

[1] See text in Appendix C regarding coverage estimates.